



ICMAI
**The Institute of
Cost Accountants of India**
(Statutory Body under an Act of Parliament)
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Role of CMAs in Viksit Bharat 2047



Behind every successful business decision,
there is always a CMA

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About the Institute

The Institute of Cost Accountants of India (ICMAI) is a statutory body set up under an Act of Parliament in the year 1959. The Institute as a part of its obligation, regulates the profession of Cost and Management Accountancy, enrolls students for its courses, provides coaching facilities to the students, organizes professional development programmes for the members and undertakes research programmes in the field of Cost and Management Accountancy. The Institute pursues the vision of cost competitiveness, cost management, efficient use of resources and structured approach to cost accounting as the key drivers of the profession. In today's world, the profession of conventional accounting and auditing has taken a back seat and cost and management accountants increasingly contributing towards the management of scarce resources like funds, land and apply strategic decisions. This has opened up further scope and tremendous opportunities for cost accountants in India and abroad.

The Institute is headquartered in New Delhi having four Regional Councils at Kolkata, Delhi, Mumbai and Chennai, 117 Chapters in India and 11 Overseas Centres. The Institute is the largest Cost & Management Accounting body in the world with about 1,00,000 qualified CMAs and over 6,00,000 students pursuing the CMA Course. The Institute is a founder member of International Federation of Accountants (IFAC), Confederation of Asian and Pacific Accountants (CAPA) and South Asian Federation of Accountants (SAFA). The Institute is also an Associate Member of ASEAN Federation of Accountants (AFA) and member in the Council of International Integrated Reporting Council (IIRC), UK.

Vision Statement

"The Institute of Cost Accountants of India would be the preferred source of resources and professionals for the financial leadership of enterprises globally."

Mission Statement

"The CMA Professionals would ethically drive enterprises globally by creating value to stakeholders in the socio-economic context through competencies drawn from the integration of strategy, management and accounting."

Institute Motto

असतोमा सदगमय	From ignorance, lead me to truth
तमसोमा ज्योतिर् गमय	From darkness, lead me to light
मृत्योर्मा मृतं गमय	From death, lead me to immortality
ॐ शान्ति शान्ति शान्तिः	Peace, Peace, Peace

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Behind every successful business decision, there is always a **CMA**



राज्यपाल, पश्चिम बंगाल
Governor of West Bengal
রাজ্যপাল, পশ্চিমবঙ্গ

FOREWORD

Cost Accountancy - Catalysing India's Journey Towards 2047

The publication "Role of CMAs in Viksit Bharat 2047" contains collective wisdom of renowned profession of Cost Accountancy which has, over the decades, developed as a viable body of stalwarts across the nation.

As Milton said, "A good book is the precious life-blood of a master spirit."

How a book is received in the professional world and the public in general depends on the relevance and gravitas of the contents.

Bacon has said, "Some books are to be tasted, others to be swallowed, and some few to be chewed and digested..." There are in this book articles that can be tasted, swallowed and digested. It all depends on the reader's choice.

Here we see a galaxy of master professionals putting their heads together for the enrichment of the readers – their fellow



राज्यपाल, पश्चिम बंगाल Governor of West Bengal

রাজ্যপাল, পশ্চিমবঙ্গ

professionals and the layman alike – and making valuable insights on the vision, the mission, the mandate and the consequential role that the Cost Accountants are expected to play in the Nation's march towards Viksit Bharat under the inspirational and transformational leadership of Hon'ble Prime Minister of India Shri Narendra Modi.

On the whole, “Role of CMAs in Viksit Bharat 2047” is a splendid invitation to the professional world of Cost Accountants and reveals to the uninformed the importance of the profession and the invaluable service it is doing for the nation's financial health, fiscal prudence and strategic direction.

Sri Chandra Wadhwa has said in his article ‘Cost accountants are poised from transition from cost controllers to strategic value creators. Cost Accountants will be now focusing on predictive costing models, real time variance analysis and dynamic simulation. Intelligence system will assist in anomaly detection, fraud prevention, margin optimisation freeing professionals to focus on higher strategic value.’



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Governor of West Bengal

राज्यापाल, पश्चिमबङ्ग

This insightful narration gives a directional approach to Cost Accountancy and its changing dynamics.

This book offers a compelling and forward-looking narrative on how cost accountancy will evolve over the next two decades. Drawing from projections by leading institutions and experts the authors envision a future where cost accountants emerge as strategic partners in the nation's progress.

The chapters cover a wide array of engaging themes that include 'CMAs to be the Power Engine of India's Growth Vehicle'; 'A Three-Pronged Strategy for Production Cost Optimisation in MSMEs & Role of CMAs'; 'Transforming Vision into Reality: The Strategic Role of CMAs'; 'Viksit Bharat 2027: A \$30 Trillion Vision for a Developed India'; 'Attaining Sustainable Development Goals – The Role of CMAs', to name just a few.

Particularly noteworthy is the emphasis on the emerging national and changing global landscape, where cost efficiency, transparency, and real-time insights will determine national and corporate competitiveness.



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I commend the authors for offering not just a scholarly treatise, but also a practical roadmap for professionals, policymakers, academicians, and students alike. Their vision aligns seamlessly with India's aspiration to become a \$30 trillion economy by 2047, as highlighted in this book, and underscores the strategic significance of the cost accounting profession in achieving that goal.

I extend my warm congratulations to all the contributors of this volume and also the entire team for bringing out such a valuable publication, thus enriching India's knowledge ecosystem. May this book not only inspire a new generation of cost accountants to step into leadership roles and contribute meaningfully to the making of a resilient, responsible, and self-reliant India, but also disseminate information to the masses about the sterling role that Cost Accounts play in nation-building.



Dr. C. V. Ananda Bose

11 July, 2025



CMA Bibhuti Bhusan Nayak
President, ICAI

MESSAGE

It gives me immense pleasure to present this special publication titled “**Role of CMAs in Viksit Bharat 2047**”, an initiative that underscores the enduring commitment of the Institute of Cost Accountants of India to the vision of a developed India by the centenary of our Independence.

This publication is of special significance, not only because it carries the insights and scholarly contributions of our eminent members of the Institute, but also because it is being released in collaboration with the esteemed Governor’s House, West Bengal, adding dignity and prominence to our collective endeavour.

This compilation of scholarly articles and forward-looking perspectives comes at a time when India is scripting a new chapter in its development journey.

Viksit Bharat@2047 is not just a vision it is a national mission. It envisions an India that is economically robust, socially inclusive, environmentally sustainable, technologically advanced, and a leader on the global stage by the year 2047, marking 100 years of independence. It embodies the aspiration of every Indian to see our nation emerge as a global exemplar of progress, equity, and innovation.

Honourable Prime Minister of our country said “***Viksit Bharat 2047* are not mere words; they are a reflection of the resolve and dreams of 140 crore people... If we resolve and move together in one direction, then we can become ‘*Viksit Bharat*’ by 2047 by overcoming all obstacles in the way.**”

In this grand vision, the role of Cost Accountants (CMAs) is not peripheral, it is central and indispensable. As a trusted professional in cost competitiveness, resource optimization, and strategic decision-making, CMAs are uniquely equipped to drive transformation across every sector of the economy.

One of the key areas where CMAs contribute is in the domain of financial planning and cost management. CMAs helps enterprises establish budgeting processes, monitor expenditures, and ensure that the cost of production remains aligned with revenue targets. This is particularly important for price-sensitive markets, where even minor inefficiencies can erode competitiveness.

In the evolving landscape of taxation, both direct and indirect, the role of CMAs in tax advisory has become increasingly significant. Their expertise



in cost accounting, financial analysis, and statutory compliance places them in a strategic position to help businesses not only meet their tax obligations but also optimize their tax strategy in line with current regulations and long-term business goals.

This book is a comprehensive of the subject matter like Technological Advancement, Innovation & Start-ups, Economic Growth & Prosperity, Modern & Resilient Infrastructure, Environmental Sustainability, Agricultural Innovation and Empowerment of Youth, Women & Marginalized Communities.

It is the witness to the thoughtful leadership and social responsibility of the CMA community. It is our collective resolve to align our professional goals with the national vision of *Viksit Bharat*, creating an India that not only grows—but grows justly, inclusively, and sustainably.

I mention all the authors for their valuable contributions and congratulate the editorial team for their efforts in bringing this important volume to life.

I take this opportunity to thank Dr. C. V. Ananda Bose, Hon'ble Governor of West Bengal for extending gracious support to this initiative. This collaboration reflects the trust reposed in the profession and its relevance in national development.

Let this publication inspire our members and stakeholders to embrace their roles as change-makers and to contribute meaningfully to the making of a *Viksit Bharat* by 2047.

Warm regards!

CMA Bibhuti Bhusan Nayak

**CMA TCA Srinivasa Prasad**

Vice President, ICAI

MESSAGE

Dear readers,

At the 10th NITI Aayog Governing Council meeting, the Hon'ble Prime Minister of India, Shri Narendra Modi ji called for a unified approach to development, stating “We must work as ‘Team India’ to achieve the goal of a developed India by 2047.”

India's journey towards becoming a *Viksit Bharat* by 2047 is not merely a strategic roadmap. It is a shared national aspiration that calls upon every citizen, every institution, and every profession to rise to the occasion. It is in this context that we are deeply honoured to present this book dedicated to exploring the Role of Cost and Management Accountants (CMAs) in *Viksit Bharat@2047*.

As we envision a *Viksit Bharat*—developed, inclusive, resilient, and globally respected, the role of CMAs is transforming from that of traditional professionals to that of strategic nation-builders. The themes explored in this volume ranging from technological innovation to environmental sustainability, illustrate the wide canvas on which CMAs are already making meaningful contributions and driving impact.

What makes our profession unique is our ability to bridge financial discipline with strategic foresight. Whether we are, guiding infrastructure projects through meticulous budgeting, or helping start-ups scale sustainably, we the CMAs bring data-driven insight and ethical judgment to the table. This is exactly what a transforming India needs, professionals who think long-term, act responsibly, and deliver results.

Viksit Bharat@2047 is not just about GDP growth, it is about inclusive prosperity, technological leadership, social justice, and environmental stewardship. CMAs are well-positioned to influence each of these areas by:

- Encouraging resource efficiency in enterprises of all sizes,
- Embedding sustainability into business models,
- Making policy through evidence-based recommendations,
- Supporting Technological Advancement and Innovation to Startups,
- Creating Modern & Resilient Infrastructure,



Role of CMAs in Viksit Bharat 2047

- Supporting Environmental Sustainability.

And most importantly, empowering Agricultural Innovation, Empowerment of Youth, Women & Marginalized Communities with financial literacy and enterprise skills.

This publication reflects the depth and breadth of thought leadership within our CMA community. It stands as both a mirror of our current contributions and a map of our future potential.

Our sincere appreciation to all contributors and the editorial team for bringing this vision to life through their hard work and dedication.

Together, let us build not just a Viksit Bharat, a Bharat that leads, includes, and inspires.

Jai Hind!

CMA TCA Srinivasa Prasad

**CMA Chittaranjan Chattopadhyay**

Chairman

Agriculture Cost Management Board,

Banking, Financial Services & Insurance Board,

Internal Auditing and Assurance Standards Board &

Council Member, ICAI

MESSAGE

VIKSIT BHARAT 2047: A FINANCIAL PERSPECTIVE**INTRODUCTION**

India's vision of Viksit Bharat 2047 is a national mission aimed at transforming the country into a developed, self-reliant and globally competitive economy by its centenary of independence. This ambitious goal requires strategic financial planning, economic inclusivity, fiscal prudence and governance reforms.

From the perspective of Cost and Management Accountants (CMAs), achieving Viksit Bharat demands a multi-pronged approach focusing on:

- Strengthening financial governance
- Optimizing fiscal policies
- Enhancing industrial competitiveness
- Promoting sustainable economic growth
- Leveraging digital finance and innovation

This article outlines the key priorities that must be addressed to ensure India's economic transformation, backed by examples and policy recommendations.

STRENGTHENING FINANCIAL GOVERNANCE & FISCAL DISCIPLINE**Key Priorities**

- **Transparent Budgeting & Fiscal Responsibility:** India must adopt data-driven fiscal policies to ensure efficient resource allocation and minimize financial leakages.
- **Debt Management & Public Expenditure Optimization:** A robust debt strategy is essential to maintain economic stability while funding large-scale infrastructure projects.
- **Tax Reforms & Revenue Generation:** Simplifying GST compliance, reducing corporate tax burdens and expanding tax bases will enhance the Government revenue.



Example: The Union Budget 2025-26 introduced income tax reforms, raising the personal exemption limit to ₹12 lakh, boosting household consumption and savings.

INDUSTRIAL COMPETITIVENESS & MSME GROWTH

Key Priorities

- ***Strengthening ‘Make in India’ & Export Capabilities:*** India must enhance global trade partnerships and boost manufacturing competitiveness.
- ***MSME Support & Credit Accessibility:*** Expanding credit guarantee schemes will empower small businesses and startups.
- ***Supply Chain Optimization & Cost Efficiency:*** Implementing cost-effective production models will improve industrial resilience.

Example: The Government’s MSME credit enhancement program has significantly boosted small business financing, ensuring economic inclusivity.

SUSTAINABLE DEVELOPMENT & ESG INTEGRATION

Key Priorities

- ***Green Finance & Renewable Energy Investments:*** India must prioritize clean energy financing to achieve net-zero emissions.
- ***Environmental, Social & Governance (ESG) Compliance:*** Embedding sustainability frameworks into corporate governance will drive responsible business practices.
- ***Circular Economy & Waste Management:*** Encouraging resource-efficient production will reduce environmental impact.

Example: The high-yield crop scheme launched for 17 million farmers promotes sustainable agriculture, ensuring food security.

DIGITAL FINANCE & TECHNOLOGICAL INNOVATION

Key Priorities

- ***AI-Driven Financial Planning & Automation:*** Leveraging predictive analytics will enhance economic forecasting.
- ***Fintech Expansion & Digital Banking:*** Strengthening digital payment ecosystems will accelerate financial inclusion.
- ***Cybersecurity & Data Protection:*** Implementing robust security frameworks will safeguard financial transactions.

Example: India’s digital public infrastructure initiative has positioned the country as a global leader in AI, cloud computing and fintech innovation.



PUBLIC-PRIVATE PARTNERSHIPS & POLICY REFORMS

Key Priorities

- **Infrastructure Financing & Investment Models:** Encouraging joint ventures will accelerate urban development.
- **Education & Skill Development:** Bridging the education-employment gap will enhance workforce productivity.
- **Rural Development & Social Empowerment:** Strengthening healthcare, education, and infrastructure in rural areas is crucial.

Example: The Viksit Bharat Young Leaders Dialogue initiative fosters youth participation in nation-building, ensuring inclusive development.

HOW VIKSIT BHARAT 2047 WILL DRIVE ECONOMIC GROWTH

The vision of Viksit Bharat 2047 is not just about achieving a higher GDP—it is about holistic development that ensures economic stability, social equity, technological leadership, and environmental sustainability. A developed India will bring higher per capita income, improved infrastructure, enhanced global trade competitiveness, and better living standards for all citizens.

Key Benefits of Viksit Bharat 2047

- **Economic Expansion:** India aims to become a \$30 trillion economy by 2047, with sustained 7-8 per cent annual GDP growth.
- **Employment Generation:** Strengthening manufacturing, MSMEs and digital industries will create millions of jobs.
- **Global Trade Leadership:** India's export sector will be enhanced through free trade agreements (FTAs) and supply chain integration.
- **Technological Advancement:** Investments in AI, IoT, robotics, and quantum computing will position India as a global tech hub.
- **Sustainable Development:** Achieving net-zero carbon emissions and expanding renewable energy projects will ensure environmental resilience.

STRATEGIC STEPS FOR ACHIEVING VIKSIT BHARAT 2047

To realize this vision, India must focus on key policy interventions and economic strategies:

1. **Infrastructure Development:** Expanding smart cities, high-speed rail, highways, and digital connectivity will boost productivity.
2. **Financial Inclusion:** Strengthening banking access, fintech innovation and digital payments will empower citizens.
3. **Education & Skill Development:** Ensuring 100 per cent skilled labour with meaningful employment will enhance workforce efficiency.



4. **Agricultural Transformation:** Promoting precision farming, agro-tech and food processing will make India the food basket of the world.
5. **Policy Reforms:** Implementing tax incentives, investment-friendly regulations and governance transparency will attract global investors.

India's Viksit Bharat 2047 vision is a once-in-a-century opportunity to redefine its economic trajectory and establish itself as a global powerhouse. With strategic planning, financial discipline, and technological innovation, India can achieve sustainable prosperity for future generations.

CONCLUSION A CALL TO ACTION FOR ECONOMIC TRANSFORMATION

Achieving Viksit Bharat 2047 requires strategic financial governance, industrial competitiveness, sustainable development, digital innovation and policy reforms. From the perspective of CMAs, these priorities must be implemented effectively to ensure India's economic success.

As India advances towards global leadership, finance professionals must align their expertise with the national vision, ensuring prosperity, inclusivity and resilience.

Together, through *Sabka Prayas*, India's transformation into a developed economy is not just a vision but a destiny waiting to be achieved.

As our "Bharat" (India) accelerates its hike towards becoming a global economic leader, we find ourselves at a defining moment in our nation's journey—a moment rich with opportunity, responsibility and purpose. In this transformative era, the role of Cost and Management Accountants (CMAs) has never been more critical. Positioned at the intersection of financial expertise, strategic insight and operational efficiency, CMAs are uniquely equipped to support India's ambitious aspiration of becoming a Viksit Bharat (Developed India) by 2047, coinciding with the centenary of its independence.

The vision of Viksit Bharat 2047, as envisioned by the Prime Minister, is not merely a governmental initiative—it is a National Mission, one that calls for collective commitment, innovation and action. "The roadmap of progress will not be decided by the Government alone but by the nation. Viksit Bharat has to be built only through *Sabka Prayas*." This powerful declaration by the Prime Minister underlines the inclusive nature of this vision and the indispensable role that each citizen, institution and profession must play.

CMAs, through their deep-rooted expertise in cost optimization, strategic financial planning, risk management and sustainable practices, stand as strategic partners in this national endeavour. They are the unseen yet essential enablers behind informed decision-making, judicious resource allocation and the creation of long-term value across both the public and private domains.

In the public sector, CMAs contribute by enhancing the efficiency of Government programs, strengthening fiscal accountability and improving transparency in infrastructure and welfare projects. Their insights help minimize wastage, plug financial leakages and ensure that every rupee spent delivers maximum socio-economic impact.

In the private sector, particularly in MSMEs and manufacturing, CMAs empower enterprises with robust cost structures, competitive pricing strategies and resilience through value engineering. By strengthening the “Make in India” initiative, they fuel industrial growth, job creation and technological advancement. Moreover, CMAs are increasingly at the forefront of the digital transformation, leveraging automation, advanced analytics, and AI-driven tools to enable data-informed strategic decisions.

As India embraces the principles of sustainability, equity and self-reliance, CMAs are instrumental in embedding ESG (Environmental, Social, and Governance) frameworks into the core of business operations. They play a vital role in promoting responsible practices, ensuring compliance with tax and regulatory frameworks and offering thought leadership in shaping economic and financial policy. Viksit Bharat 2047 encapsulates the strategic importance of the citizen for India’s transformation journey and serves as a call to action.

Cost and Management Accountant as citizens should align their personal mission with the national vision—to see beyond numbers and balance sheets and to recognize their potential as change-makers in India’s growth narrative. Together, as a community of committed professionals, CMAs have the power to shape a future that is prosperous, inclusive, resilient and globally competitive.

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Chairman

Professional Development & CPE Committee and
Council Member, ICAI

FOREWORD

FUTURE ROLE OF CMAs IN INDIA VISION 2047 AND REQUIRED CAPACITY BUILDING

India is at the cusp of a transformational journey, aiming to emerge as a \$30 trillion economy by 2047. This vision focuses on inclusive growth, sustainability, innovation, and global competitiveness. In this journey, Cost and Management Accountants are not merely record-keepers but strategic decision-makers. Cost and Management Accountants (CMAs) must reposition themselves not only as national enablers but as global professionals who can navigate complex international environments. Their role is evolving beyond cost management to encompass policy advocacy, performance management, sustainability, digital innovation, and national economic development. Below is a section-wise enhancement of the CMA role, embedding practical global applications and relevance.

1. Economic Efficiency and Global Competitiveness

India's ambition to compete globally requires CMAs to facilitate cross-border operational efficiency and productivity.

- **Cost Optimization via International Benchmarks:** CMAs should leverage benchmarking data from the OECD, WTO, and UNIDO to help Indian firms assess their cost structures in relation to international competitors.
- **Global Productivity Tools:** Incorporate lean practices from Japan, Kaizen principles, German engineering cost models, and U.S. Six Sigma analytics to refine operations.

Practical Scenario: A CMA advising an Indian auto-parts manufacturer can use global cost curves and time-driven Activity-Based Costing to evaluate competitiveness in export markets like Europe or ASEAN.

2. Public Financial Management and Governance

CMAs must integrate globally recognized public financial practices to elevate the effectiveness of Indian governance.

- **Adoption of International Standards (IPSAS):** Encourage and



implement International Public Sector Accounting Standards to ensure fiscal transparency and improve international investor confidence.

- **Global Project Management Frameworks:** Apply donor-driven financial control frameworks (e.g., World Bank and UNDP projects) in domestic infrastructure and welfare programs.

Practical Scenario: A CMA working on a Smart City project could use results-based budgeting aligned with SDGs to improve accountability to international funding partners.

3. Sustainability and Climate Action

As ESG becomes main-stream globally, CMAs can lead organizations in aligning with global environmental goals.

- **Sustainability Reporting Standards:** Promote adherence to Global Reporting Initiative (GRI), Sustainability Accounting Standards Board (SASB), and the new IFRS-ISSB disclosures.
- **Carbon Credit Management:** Assist Indian firms in monetizing carbon credits via global markets, especially under Article 6 of the Paris Agreement.

Practical Scenario: A CMA in a manufacturing firm can quantify emissions, track offset programs, and report under Greenhouse Gas Protocol scopes, enabling access to green funding from European financial institutions.

4. Empowering Atmanirbhar Bharat & MSMEs with Global Reach

CMAs are vital in transforming MSMEs into globally competent entities.

- **Global MSME Integration:** Assist Indian MSMEs in plugging into international value chains by achieving certifications (ISO, CE, RoHS) and cost competitiveness.
- **Export Financing & Risk Mitigation:** Guide MSMEs on Letters of Credit, EXIM Bank procedures, and hedging forex exposures.

Practical Scenario: A CMA mentoring a textile SME in Surat could enable it to access EU markets by aligning costing systems with EU compliance norms and calculating subsidy impacts.

5. Technology Integration and Digital Transformation

CMAs must evolve into global tech navigators, integrating next-gen tools into finance and costing.

- **ERP & Blockchain for Compliance:** Leverage platforms like SAP, Oracle, and Blockchain-based smart contracts to ensure audit trails and global compliance.



- **Data Analytics for Predictive Costing:** Use AI/ML models to simulate scenarios for global pricing strategies and foreign tax impacts.

Practical Scenario: A CMA in a pharma company can deploy predictive analytics to determine the cost implications of FDA compliance and patent costs across geographies.

6. Strategic Role in Policy and Governance

CMAs should become global advisors on economic policy, especially as India asserts its voice in G20 and global trade forums.

- **Participation in International Think Tanks:** Actively engage with OECD, UNCTAD, and ADB to influence global cost policy frameworks.
- **Evidence-Based Policy Formulation:** CMAs can use econometric modeling and cost simulations to support FTA negotiations, WTO dispute assessments, and tax treaties.

Practical Scenario: A CMA advising NITI Aayog can simulate the fiscal impact of carbon border taxes on Indian exporters under EU's Carbon Border Adjustment Mechanism (CBAM).

7. Transparency and Ethics in a Global Compliance Regime

With globalization comes scrutiny. CMAs are ethical stewards of governance and anti-corruption measures.

- **Global Anti-Corruption Frameworks:** Help implement frameworks aligned with the U.S. Foreign Corrupt Practices Act (FCPA), UK Bribery Act, and OECD Anti-Bribery Convention.
- **Digital Forensics & Fraud Analytics:** CMAs can lead corporate fraud detection through forensic audits using global audit software.

Practical Scenario: In public procurement, a CMA can use cost analytics to evaluate bids objectively and align procurement with World Bank's Value-for-Money principles.

8. Human Capital and Financial Literacy with Global Outreach

To support India's global aspirations, CMAs must scale financial literacy and technical skills.

- **Cross-Border Professional Education:** Promote reciprocal recognition of CMA India credentials with CIMA (UK), CMA (US), and ACCA, increasing global mobility of Indian professionals.
- **Financial Inclusion Inspired by Global Models:** Emulate models like M-PESA / UPI to expand rural access to digital finance and cost literacy.

Practical Scenario: CMAs can design micro-entrepreneurship costing



templates that simplify pricing for rural artisans targeting global online platforms.

9. India's Global Economic Integration

India's economic ascent requires seamless global integration in trade, finance, and supply chains.

- **Export Costing & Transfer Pricing:** CMAs should help exporters navigate WTO- compliant pricing and support transfer pricing documentation under OECD BEPS guidelines.
- **Global Supply Chain Management:** Guide Indian firms to meet standards like ISO 28000 (security), and optimize costs across multinational logistics networks.

Practical Scenario: A CMA in a tech hardware company can help manage working capital efficiently while integrating with Asian and European supply hubs.

Way forward – Capacity Building

CMAs must think global but act local. By adopting international frameworks, tools, and networks, and contextualizing them for India's socio-economic landscape, CMAs will truly become global navigators of cost leadership and sustainability. They must engage with global institutions (IFAC, UNGC, IMF etc.), invest in continuous upskilling, lead digital & ESG revolutions and support policy innovation. **Capacity building in the following manner is essential if CMAs envisage a significant global role in future.**

Global Certification & Recognition

- Pursue international certifications (e.g., CPA, CIMA, ACCA, CMA (US))
- Align with global bodies to ensure portability of credentials

Curriculum Modernization

- Incorporate ESG reporting, and Blockchain Accounting in education
- Exposure to global case studies and simulations
- Training in multinational corporate laws and tax systems

Skill Development

- Emphasis on:
 - Strategic decision-making
 - Advanced analytics & visualization tools (Power BI, Tableau)



- ▲ ERP systems (SAP, Oracle)
- ▲ Automation & AI in finance
- Soft skills: Business communication, cultural intelligence, negotiation

International Internships & Placements

- Collaborate with MNCs and Big Four firms for global exposure
- Encourage short-term overseas assignments or exchange programs

Faculty & Institutional Capacity

- Faculty training in global standards and pedagogy
- Set up Centers of Excellence (CoEs) in emerging areas like ESG, FinTech, and AI in accounting

Networking & Global Engagement

- Participate in international conferences, summits, and research forums
- Join global professional communities and forums

Policy and Government Support

- Government-backed initiatives to position Indian CMAs in global markets
- ICMAI to create a global placement cell and career guidance services

Through these actions, CMAs won't just be implementers of India Vision 2047—they will be architects of a globally respected India. As India marches toward its centenary of independence, CMAs are poised to become strategic pillars of nation-building. Their dynamic role in improving efficiency, promoting sustainability, advising on policy, and integrating technology into financial systems aligns perfectly with the aspirations of India Vision 2047. Going forward, the profession must embrace continuous learning, innovation, and collaboration with policymakers and industries. By doing so, CMAs will not only remain relevant but emerge as leaders in shaping India's transformation into a resilient, inclusive and prosperous economy.

CMA Manoj Kumar Anand



CMA (Dr.) Debaprosanna Nandy
Secretary (Officiating), ICAI

MESSAGE

It gives me immense pleasure to present this book of thought-provoking articles on the pivotal role of Cost and Management Accountants (CMAs) in building a Viksit Bharat 2047 a vision of the Indian government to transform India into a developed nation by the year 2047, when India will celebrate its 100th anniversary of independence. This initiative aims to achieve comprehensive and sustainable development across various sectors, including economy, society, environment, and governance. The concept envisions India as a leading global power with high standards of living, equitable growth, and environmental stewardship.

India stands at a transformative juncture. As we strive to become a global economic powerhouse, the contribution of professionals—particularly CMAs—has never been more crucial. With their expertise in strategic cost management, performance evaluation, financial planning, and sustainable value creation, CMAs are uniquely positioned to drive excellence across all sectors of the economy.

CMAs are crucial to the financial health and strategic decision-making of organizations. Their role extends beyond businesses to the broader economy, contributing to good governance, economic development, and sustainable practices.

They are trained to analyse cost structures and drive efficiency across various sectors. They help organizations reduce operational waste, optimize resource utilization, and adopt cost-effective processes. Under Section 148 of the Companies Act, 2013, the Central Government mandate certain companies to maintain cost records and conduct cost audits. This legal provision underscores the critical role CMAs play in ensuring transparency and cost-efficiency.

This book captures the diverse and dynamic ways in which CMAs are contributing to India's journey of development across key national priorities:

- **Technological Advancement, Innovation & Start-ups:** CMAs are facilitating cost-efficient innovations and helping start-ups scale with sound financial planning and risk management.
- **Economic Growth & Prosperity – MSMEs:** As the backbone of India's economy, MSMEs benefit immensely from CMA support in improving



Role of CMAs in Viksit Bharat 2047

cost structures, accessing credit, and achieving operational efficiency.

- **Modern & Resilient Infrastructure:** Through cost-benefit analysis and lifecycle costing, CMAs ensure infrastructure projects are both economically viable and sustainable.
- **Environmental Sustainability:** CMAs champion green accounting and sustainable practices, guiding industries toward environmentally responsible growth.
- **Agricultural Innovation:** From supply chain optimization to resource allocation, CMAs are enabling transformation in agriculture for enhanced productivity and farmer prosperity.
- **Empowerment of Youth, Women & Marginalized Communities:** CMAs actively contribute to inclusive development by promoting financial literacy and entrepreneurship among underrepresented groups.
- **Global Leadership:** As India assumes greater global responsibilities, CMAs are equipping organizations with strategic insights to compete on the world stage.

This publication is not only a testament to the profession's growing relevance, but also an inspiring roadmap for how CMAs can continue to shape the nation's future.

I congratulate all the contributors for their valuable strategic insights and extend my heartfelt thanks to the editorial team for curating this important body of work. Let us continue to uphold the ideals of excellence, ethics, and service as we work together to realize the dream of Viksit Bharat 2047.

With warm regards,

CMA (Dr.) Debaprosanna Nandy



CMA (Dr.) Sumita Chakraborty
Additional Director, ICAI

EDITORIAL

The challenging journey towards *Viksit Bharat 2047*, as envisioned by the Hon'ble Prime Minister Shri Narendra Modi, is the living embodiment of the hopes and aspirations of 140 crore Indians. It is a National Mission that calls not just for Government involvement but for the unified resolve of every institution, industry and professional community. In this collective endeavour, the role of Cost and Management Accountants (CMAs) is not ancillary but foundational.

As India navigates a complex economic landscape marked by internal challenges and global uncertainties, the expertise of CMAs has never been more vital. Whether ensuring regulatory compliance, identifying financial risks, or safeguarding institutional assets, CMAs are pivotal in fortifying India's financial architecture.

In an era defined by rapid technological change, CMAs are also helping institutions embrace innovation responsibly. As the finance ecosystem evolves towards digital platforms and fintech solutions, CMAs provide critical assessments of cost-effectiveness and long-term viability, ensuring that innovation is both bold and balanced.

This publication is being released at a defining moment for the nation one that is filled with challenges, but equally rich in opportunity. From global supply chain realignments to climate imperatives, from India's rapid digitization to its emergence as a global Startup powerhouse, the nation's development journey demands foresight, precision and accountability. CMAs bring all of this and more to the table.

Across the Chapters of this publication, readers will encounter a dynamic portrait of the evolving role of CMAs in advancing the core priorities of *Viksit Bharat*:

Technological Advancement, Innovation and Startup

India's ascent as a global innovation hub is underpinned by startups that are agile, ambitious and purpose-driven. CMAs are instrumental in guiding these ventures not only through cost structuring and compliance but also by shaping sustainable, scalable business models. They are the architects of responsible entrepreneurship and long-term value creation.



Economic Growth & Prosperity – MSMEs

Micro, Small, and Medium Enterprises (MSMEs) form the economic backbone of the country's economy. CMAs enable their growth by instituting structured costing systems, facilitating access to capital, and mentoring for operational efficiency. Their role is key to ensuring balanced, inclusive growth across regions and sectors.

Modern & Resilient Infrastructure

As technologies like AI, blockchain and digital governance reshape industries, CMAs are guiding institutions in aligning technology investments with strategic outcomes. From ROI analysis to real-time data dashboards, CMAs ensure that digital transformation is fiscally sound and strategically aligned.

Advancing Environmental Sustainability

As ESG considerations become central to business strategy, CMAs are at the forefront of integrating sustainability into financial planning. Through green accounting, carbon costing and impact assessment, they help convert sustainability into a source of competitive advantage.

Agricultural Innovation

From precision farming to optimizing agri-value chains, CMAs are facilitating the transformation of Indian agriculture. Their role in supporting Farmer Producer Organizations (FPOs) and promoting financial literacy in rural India strengthens the foundation for inclusive growth.

Empowerment of Youth, Women & Marginalised Communities

In two of the most crucial sectors—healthcare and education—CMAs are shaping sustainable service delivery models. From hospital costing to outcome-based education financing, they ensure that impact and efficiency are seamlessly integrated. Development must be inclusive to be meaningful. CMAs contribute to social equity by streamlining fund flows for welfare programs, assessing social outcomes, and building financial capacities among marginalized communities.

Positioning India for Global Leadership

As India steps confidently onto the global economic stage, CMAs are essential in supporting international cost benchmarking, trade analysis and regulatory compliance. They enhance India's financial credibility and competitiveness in a globalized economy.



This publication reflects more than professional insight; it symbolizes civic responsibility. It underscores the growing trust that institutions of governance place in the CMA profession and the pivotal role CMAs play in shaping ethical governance, fiscal prudence, and national policy.

To fully harness this potential, structured collaboration must be fostered between the CMA community, Government bodies, academia and industry. CMAs must be embedded in think tanks, policy councils, sustainability boards, and reform panels. The Institute of Cost Accountants of India bears a profound responsibility—to equip, mobilize and champion the profession in alignment with the national vision.

As the world faces volatility and transformation, India's aspiration to become Viksit Bharat by 2047 on the centenary of its independence will be anchored in the strength of its institutions and the caliber of its professionals. CMAs must rise to this occasion not merely as financial analysts, but architects of change, and custodians of public trust.

This publication titled *The Role of CMAs in Viksit Bharat 2047* is not just a collection of essays; it is a collective vision, a professional pledge and an intellectual offering to one of the most consequential missions of our time: transforming India into a developed, inclusive, sustainable, and globally respected nation.

Let this publication serve as both a record of progress and a beacon of purpose. Let it ignite, in every reader, whether a student, practitioner, policymaker, or entrepreneur, a renewed commitment to nation-building.

With clarity of vision, discipline of execution and an unwavering pursuit of excellence, let us script the next defining chapter of India's growth story, a story of resilience, equity, and self-reliance.

CMA (Dr.) Sumita Chakraborty



Contents

SI No	Title	Author	Page
1	CMAs - COMPASS FOR SUCCESS IN NATION BUILDING	CMA Asim Kumar Mukhopdhyay	1
2	THE PIVOTAL ROLE OF COST AND MANAGEMENT ACCOUNTANTS IN REALIZING VIKSIT BHARAT 2047	CMA Bikash Prasad	10
3	VIKSIT BHARAT 2047 AND MANAGEMENT ACCOUNTANTS	CMA Prof. Binay Bhushan Chakrabarti	16
4	COST ACCOUNTANTS IN INDIA: VISION 2047	CMA Chandra Wadhwa & CMA Sankalp Wadhwa	22
5	CMAs - THE CATALYSTS FOR GLOBAL LEADERSHIP IN COMPETITIVE ADVANTAGE - NAVIGATING 'VIKSIT BHARAT' - 2047: AN EMPIRICAL STUDY	CMA (Dr.) Dinabandhu Mukhopadhyay	25
6	CMAs TO BE THE POWER ENGINE OF INDIA'S GROWTH VEHICLE (Viksit Bharat in 2047)	CMA (Dr.) Girish Jakhotiya	44
7	THE INDISPENSABLE ROLE OF COST AND MANAGEMENT ACCOUNTANTS IN ADVANCING INDIA'S VIKSIT BHARAT - 2047 THROUGH ENVIRONMENTAL, SOCIAL, AND GOVERNANCE PRINCIPLES	CMA Hari Nagrani	55
8	A THREE PRONGED STRATEGY FOR PRODUCTION COST OPTIMISATION IN MSMEs & ROLE OF CMAs	CMA (Dr.) Jayaram Ramakrishnan	63
9	CMAs' KEY ROLES IN ACHIEVING THE VISION OF VIKSIT BHARAT 2047	CMA Mohan Vasant Tanksale	71
10	TRANSFORMING VISION INTO REALITY: THE STRATEGIC ROLE OF CMAs	CMA (Dr.) Niranjan Mahendranath Shastri	77

11	OPI's JOURNEY: BUILDING HEALTH, TRUST, AND COMMUNITY	CMA Parag Avinashbhai Swadia	83
12	VALUE GENERATION POWERED BY DIGITAL TRANSFORMATION FOR DEVELOPED INDIA 2047: CMAs' PLAYBOOK	CMA (Dr.) Paritosh Basu	87
13	SUSTAINABLE ENERGY TRANSITION – ROLE OF CMAs	CMA Partha S Bhattacharyya	103
14	THE ROLE OF CMAs IN ACHIEVING VIKSIT BHARAT - 2047: A STRATEGIC CONTRIBUTION TO INDIA'S FUTURE GROWTH	CMA Prasanna Kumar Acharya	108
15	CMAs IN POLICY, PERFORMANCE AND PROGRESS!	CMA Pomila Jaspal	114
16	CMAs - THE CATALYSTS OF VIKSIT BHARAT 2047	CMA Rajneesh Jain	124
17	CMAs: THE STRATEGIC PARTNERS TOWARDS VIKSIT BHARAT	CMA Rakesh Kumar Jain	131
18	CMAs AS CATALYST TO DRIVE ECONOMIC & BUSINESS GROWTH	CMA Rohit Kumar	137
19	VIKSIT BHARAT 2047: A \$30 TRILLION VISION FOR A DEVELOPED INDIA	CMA Santosh Sharma	151
20	CATALYSTS OF TRANSFORMATION: THE STRATEGIC ROLE OF CMAs IN REALISING THE VISION OF VIKSIT BHARAT @ 2047	CMA Sunil S Bagi	158
21	ATTAINING SUSTAINABLE DEVELOPMENT GOALS THE ROLE OF CMAs	Dr. Swapan Sarkar	167

CMAs - COMPASS FOR SUCCESS IN NATION BUILDING



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INTRODUCTION

As India approaches its centenary of independence in 2047, the Government has laid out a bold vision for a ‘Viksit Bharat’—a future-ready, self-sustaining and inclusive nation. This transformative blueprint aspires to position India among the world’s most advanced nations, underpinned by robust economic growth, cutting-edge infrastructure, global technological leadership, environmental stewardship and a society rooted in equity and empowerment. At its core, Viksit Bharat 2047 is about unlocking the full potential of every Indian, while establishing the country as a beacon of innovation, governance excellence, and social advancement on the world stage.

THE VISION OF VIKSIT BHARAT 2047

The Viksit Bharat vision is broad-based and multi-dimensional. It sets out ambitious, yet achievable goals for India to become a \$30 trillion economy by 2047 while ensuring zero poverty, comprehensive education, robust healthcare, empowered women, technological leadership, and environmental stewardship. The key pillars of this vision include:

1. Zero poverty and inclusive development
2. Farmer welfare and agricultural transformation
3. Women empowerment
4. Education and skilling for the future
5. Middle-class prosperity
6. Universal healthcare access
7. National security and strategic stability
8. Economic growth and financial inclusion
9. Ease of doing business
10. World-class infrastructure



11. Technology and Innovation

12. Environmental sustainability and climate action

These pillars represent a comprehensive development model where economic advancement goes hand-in-hand with social equity and environmental responsibility.

Achieving this vision demands coordinated efforts across all sectors—Government, public corporations, private corporations and the community at large. Central to this transformation is robust financial management, strategic planning, and effective resource allocation. This is where the role of Cost and Management Accountants (CMAs) becomes indispensable. With their expertise in cost control, budgeting, performance analysis, and sustainable finance, CMAs are uniquely positioned to steer India's development journey with accountability and efficiency. Whether optimizing public expenditure, enabling industry competitiveness, or promoting financial literacy at the grassroots, CMAs serve as catalysts in translating the Viksit Bharat vision into measurable outcomes. The present stage at which India is we are at a *Kartavya Kal* where every CMA is contributing to India's growth story by doing their duties. As India steps into its *Amrit Kaal*, CMAs need to emerge as not just financial experts—they need to become nation builders shaping a prosperous future for generations to come.

HOW CMAS DRIVE ECONOMIC GROWTH BY BUILDING A ROADMAP TO ACHIEVE FINANCIAL FITNESS ACROSS INDUSTRIES AND FUNCTIONS

Strategic financial management forms the backbone of sustainable economic growth. It refers to the disciplined approach of planning, directing, monitoring, organizing, and controlling financial resources to achieve long-term goals. Cost and Management Accountants (CMAs), as custodians of cost efficiency and value enhancement, play a pivotal role in this arena.

1. Resource Allocation and Optimization

CMAs are skilled in driving optimal utilization of capital, workforce, and resources to achieve efficiency and meaningful outcomes. In a rapidly growing economy like India, optimal resource use is essential to scale up output while minimizing waste.

- Utilize methodologies like *activity-based costing* and *cost-volume-profit (CVP) analyses* to help firms decide which products, projects, or markets deserve investment.
- Analyze capacity utilization, helping industries eliminate inefficiencies and improve productivity.



- In public expenditure, CMAs can assess whether Government funds are being deployed towards high-impact developmental areas such as infrastructure, health, and education.

2. Capital Structuring and Investment Appraisal

For both Government and private enterprises, choosing the right capital mix and investment projects can make or break profitability and scalability.

- CMAs can use *financial metrics and modelling* techniques to evaluate large-scale investments.
- They can assess *risk-adjusted returns* and conduct *scenario planning* to support informed investment decisions in volatile markets.
- CMAs can also assist in designing *public-private partnership (PPP)* models that allow for shared risks and returns in infrastructure development—vital for a growing economy.

3. Value Optimization

One of the most direct ways CMAs can impact economic growth is by enhancing corporate profitability through cost optimization and value enhancement.

- CMAs can develop cost management systems using *target costing*, and *life-cycle costing* to ensure enterprises remain competitive.
- They need to monitor performance indicators and set *benchmarking standards* against global leaders, pushing Indian industries toward international competitiveness.
- By improving profit margins, CMAs can enable businesses to reinvest earnings into expansion and R&D—key drivers of growth.

4. Financial Strategy for MSMEs and Startups

India's MSME sector stands as a dynamic engine of job creation and entrepreneurial innovation. However, many such firms lack structured financial planning, strategy building which hampers growth.

- CMAs can help MSMEs in building a strategic blueprint for growth
 - Prepare fund flow analyses and assess how financially mature the organization is.
 - Working capital management, ensuring adequate liquidity for daily operations.
 - They can develop *scalable cost models* that adapt to changing production volumes, protecting small firms from financial shocks.



- ▲ Build probabilistic models to enable companies to ensure risk-adjusted returns particularly in today's volatile geo-political environment.
- CMAs can assist in pricing strategies, cost-benefit analysis, and breakeven planning, giving entrepreneurs a robust roadmap to profitability and survival.

5. Tax Planning and Regulatory Compliance

Robust tax planning not only boosts company savings but also strengthens Government revenue. CMAs can act as trusted advisors in:

- Optimizing GST and corporate tax structures for businesses without violating legal frameworks.
- Supporting transfer pricing compliance and reducing litigation risk in international trade.
- Educating businesses on evolving tax norms, thus minimizing penalties and facilitating smoother operations.

By improving compliance and reducing tax-related inefficiencies, CMAs contribute to formalizing the economy and enhancing transparency.

6. Digitization of Financial Operations

Digital transformation in finance can unlock massive efficiencies. CMAs can lead this evolution by:

- Implementing ERP systems and *digital financial dashboards* to centralize and streamline financial data. CMAs should own the conceptualization, adoption and improvement of ERP systems and effectively partner with SMEs who have IT product knowledge and vendors. This will not only make the system robust for the company they work with but also help create new modules.
- Build AI models suited for every sector that addresses that key challenges of that sector and building AI based solutions that can be deployed at scale to drive productivity gains.
- Using data analytics to detect fraud, monitor performance, and forecast financial trends.

As digital finance grows, CMAs need to bridge traditional practices with modern tools, ensuring India's economy becomes smarter and more agile.

7. Global Expansion and Export Competitiveness

To become a \$30 trillion economy, India must expand its global footprint. CMAs can help Indian firms enter and thrive in international markets by:



- Providing strategic guidance on global costing frameworks and managing exposure to currency fluctuations.
- Preparing export pricing strategies that are both competitive and profitable.
- Ensuring compliance with global financial reporting and costing norms—essential to building international trust.

CMAs can also assist with *free trade agreement (FTA)* impact analysis and cost modeling for tariff and non-tariff barriers, helping businesses capitalize on global opportunities.

8. Business Continuity and Risk Management

In a world of geopolitical volatility, supply chain disruptions, and financial uncertainty, CMAs can help businesses remain resilient.

- They must develop contingency cost plans, cash flow buffers, and risk mitigation matrices.
- CMAs need to play a role in internal control systems and corporate governance, strengthening long-term sustainability.
- In sectors like manufacturing, logistics, and health, CMAs to develop risk-based performance monitoring tools that identify and address vulnerabilities early.

9. Sector-Specific Strategic Management

India's economy is diverse—ranging from agriculture and textiles to IT and defense. CMAs can tailor their financial strategies to the unique challenges of each sector:

- ***In agriculture:***
 - CMAs can build cost models for crops and livestock to help farmers understand profitability and manage input costs.
 - They support subsidy planning and usage tracking, ensuring benefits reach intended recipients.
 - CMAs can design farm-to-market models, including logistics and value addition costs, to strengthen agri-businesses and FPOs (Farmer Producer Organizations).
- ***In manufacturing and MSMEs:***
 - CMAs conduct process costing, standard costing, and lean manufacturing cost analysis to enhance efficiency.
 - For MSMEs, they enable cost-effective production planning and assist in applying for schemes like PLI (Production Linked Incentives).



- CMAs can guide on compliance under GST, labor laws, and environmental norms, ensuring smooth scaling.
- ***In infrastructure***
 - CMAs conduct life cycle cost analysis of infrastructure projects to assess long-term viability.
 - They structure Public-Private Partnerships (PPPs) using risk-sharing cost models.
 - CMAs provide advisory on debt-equity structuring, user fee pricing, and budgetary impact assessments.
- ***In RE and Sustainability:***
 - CMAs evaluate capital expenditure (CAPEX) and operational costs (OPEX) of solar, wind, and bioenergy projects.
 - They assist in carbon accounting, ESG reporting, and monetizing environmental benefits like carbon credits.
 - CMAs analyze policy incentives, like Viability Gap Funding, to make green energy projects bankable.
- ***In IT, Digital Services and Startups:***
 - CMAs play a vital role in helping startups design scalable cost frameworks and accurately assess customer acquisition costs to drive sustainable growth.
 - They develop subscription and SaaS pricing strategies, ensuring financial stability during rapid growth.
 - In IT services, they assess outsourcing costs, global pricing models, and cyber risk budgeting.
- ***In Defence:***
 - CMAs ensure cost audits in defense procurement, reducing overspending.
 - They analyze cost of indigenization vs. imports for weapons and technology.
 - CMAs can develop cost-monitoring frameworks for Make in India defense projects.
- ***In transportation and Logistics:***
 - CMAs help logistics companies manage fleet costs, fuel efficiency, and warehousing overheads.
 - They optimize freight pricing models, especially for multimodal logistics.
 - In public transport, CMAs design financially sustainable fare structures and evaluate PPP models.



10. Supporting Government Economic Policy

The Lev and Schwartz Model (1971) is a foundational framework for valuing human capital—an individual's economic value based on future earnings. The model treats human capital similarly to physical assets, emphasizing that people's knowledge, skills, and potential to generate income can be quantified and reported.

The formula is:

$$V_r = \sum (T - t) I(t) / (1 + r)^{t-r}$$

V_r = the value of an individual of age 'r'

$I(t)$ = the individual's annual earnings in year 't'

r = the discount rate (cost of capital)

T = retirement age

This model focuses on the economic value of an individual or group based on projected earnings, assuming a predictable career trajectory and discounting future income to present value.

- CMAs working with Government bodies and institutions can use the Lev and Schwartz model to assess the value of investments in education and skilling programs like Skill India, PMKVY, and NEP implementation.
- By projecting the economic return on human development, CMAs can support evidence-based budgeting and impact evaluation for national schemes aligned with Viksit Bharat 2047.

On a macroeconomic level, CMAs assist policymakers and public institutions by:

- Analyzing the fiscal impact of new economic policies through cost-effectiveness and sensitivity analysis.
- Supporting budget preparation and public expenditure reviews for Ministries and Departments.
- Helping to shape subsidy reforms, social welfare scheme optimization, and infrastructure prioritization with cost-conscious insights.

11. Improving Education and Skill Development

Viksit Bharat demands a bold reimagining of India's human capital to power the country's future growth. CMAs can:

- Participate in curriculum development to incorporate financial literacy, cost management, and sustainability in school and college programs.



- Provide training and capacity-building for students, entrepreneurs, self-help groups (particularly in rural areas), and working professionals to foster inclusive development.
- Partner with content creators with massive following or mentor young and aspiring CMAs to develop content on financial literacy.
- Mentor budding professionals and startups under programs like Atal Innovation Mission, Startup India etc.
- Conducting financial awareness and budgeting workshops in rural India.

12. Facilitating Ease of Doing Business

Viksit Bharat emphasises reducing red tape, simplifying regulations and enhancing investor confidence. CMAs support these goals by:

- Making it easier to navigate Cost Accounting Standards and comply with company law requirements.
- Facilitating digitalization of tax and compliance reporting for businesses.
- Acting as advisors for risk management and regulatory planning.
- Streamlining cost structures and suggesting optimal business processes.

Their expertise contributes directly to reducing compliance burdens, enhancing productivity, and creating a business-friendly ecosystem.

13. Infrastructure and Urban Planning

Massive investments in infrastructure require efficient cost management. CMAs can:

- Evaluate infrastructure project proposals for financial viability.
- Monitor costs during execution and recommend corrective actions.
- Support the Smart Cities Mission and AMRUT by enabling effective and sustainable urban financial planning.

14. Environmental Accounting and Sustainability Reporting

India's green goals need quantifiable measurement. CMAs can help in the following areas:

- Integrating Environmental Management Accounting (EMA) systems to monitor and manage the environmental costs associated with production.
- Assisting companies in adhering to ESG (Environmental, Social, and Governance) norms and reporting standards.
- Promoting the adoption of circular economy practices and waste-to-energy initiatives through cost-benefit analysis.



- Helping industries quantify the cost of carbon emissions and prepare for carbon trading markets.

15. Shaping Policy and Practice: The institutional role of Institute of Cost Accountants of India (ICMAI)

The ICMAI itself has a large institutional role to play in:

- Developing industry-relevant syllabi to align with national goals.
- Driving research in cost strategy and sustainable finance, alongside partnerships with flagship initiatives like Digital India, Make in India, and Skill India.
- Encouraging members to participate in social impact initiatives and rural outreach programs.

The institute can act as a policy advocate and think tank to shape India's development path.

CONCLUSION

Viksit Bharat 2047 is not merely a dream but a strategic blueprint for India's centenary as an independent nation. It encompasses a comprehensive, forward-looking roadmap that seeks to elevate India's global stature while ensuring dignity, opportunity and sustainability for every citizen. CMAs, as torchbearers of financial discipline and strategic management, have an indispensable role in actualizing this vision.

By aligning their professional goals with national priorities, CMAs can become key contributors in India's journey from a developing nation to a global powerhouse. Whether it's through strategic thinking, participation in Government programs, supporting key industries, environmental audits, or digital innovation, CMAs are well-positioned to lead transformative change. As India prepares for its tryst with destiny in 2047, the role of CMAs will not just be relevant but it will be foundational.

Together, with commitment, vision, and integrity, CMAs can help build a truly Viksit Bharat—a nation that thrives on innovation, equity, sustainability and resilience.



THE PIVOTAL ROLE OF COST AND MANAGEMENT ACCOUNTANTS IN REALIZING VIKSIT BHARAT 2047



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ABSTRACT

The Viksit Bharat 2047 initiative envisions India as a \$30 trillion developed economy by 2047, emphasizing inclusive growth, sustainability and technological advancement. Cost and Management Accountants (CMAs), with their expertise in cost management, strategic planning, and data analytics, are pivotal in achieving this vision. This article examines CMAs' contributions to economic growth, infrastructure development, and social empowerment, aligned with the four pillars of Viksit Bharat namely yuva (youth), garib (poor), mahila (women), and kisan (farmers). It highlights how CMAs can optimize resources, mitigate risks and integrate digital tools to support India's transformation. This article proposes strategies to enhance CMAs' impact, including upskilling in AI and ESG frameworks, to ensure India's journey to a prosperous, equitable future.

INTRODUCTION

Visit Bharat 2047 is India's ambitious roadmap to become a developed nation by its centennial independence, targeting a \$30 trillion economy with a per capita income of \$17,635, necessitating 8–10 per cent annual GDP growth. This vision rests on economic prosperity, social inclusion, sustainability and governance, requiring robust financial strategies. Cost and Management Accountants (CMAs) from the Institute of Cost Accountants of India (ICMAI), are uniquely equipped to drive this transformation. Unlike traditional accountants, CMAs focus on strategic cost management, performance evaluation and data-driven decision-making, aligning financial planning with national goals.

India's per capita income at \$2,540 in 2023, must grow at an unprecedented rate to meet the World Bank's developed nation threshold of \$14,006 (2024), projected to rise to \$17,635 by 2047. CMAs play a critical role in optimizing



resources for infrastructure projects (Rs. 11.11 lakh crore allocated in 2024) and welfare schemes like PM Mudra Yojana, benefiting 28 crore individuals. This article analyzes CMAs' contributions across sectors, forecasts their future impact and proposes strategies to address challenges, ensuring alignment with Viksit Bharat's inclusive growth model.

SECTION 1

VIKSIT BHARAT 2047 – A VISION FOR DEVELOPMENT

Viksit Bharat 2047 aims to transform India into a developed nation by 2047, focusing on economic growth, social progress, environmental sustainability, and effective governance. The initiative targets a \$30 trillion economy, requiring consistent 8–10 per cent GDP growth, compared to the 5.4 per cent per capita income growth over the past decade. Key priorities include:

- **Economic Growth:** Enhancing manufacturing and services, with a focus on sectors like semiconductors and green technology.
- **Infrastructure:** Rs. 11.11 lakh crore for capital expenditure in 2024, including Rs. 75,000 crore in interest-free loans to states.
- **Social Empowerment:** Over 80 crore beneficiaries under food security schemes and 28 crore Jan Dhan accounts for financial inclusion.
- **Sustainability:** Initiatives like *Jal Jeevan Mission* and *Green Mahotsav*.
- **Youth and Innovation:** Programs like *PM Kaushal Vikas Yojana (PMKVY)*, training 1.42 crore individuals, leverage India's demographic dividend.

The four pillars—*yuva*, *garib*, *mahila*, and *kisan*—form the backbone of this vision, emphasizing inclusive development. CMAs ensure financial discipline, cost efficiency, and performance tracking, critical for achieving these ambitious targets.

SECTION 2

THE STRATEGIC ROLE OF CMAS IN VIKSIT BHARAT

CMAs, as strategic financial professionals, bridge the gap between policy and execution. Their expertise in cost management, forecasting, and analytics aligns with Viksit Bharat's goals. Key roles include the following

2.1 Financial Planning and Forecasting

CMAs can develop long-term financial models to support India's \$30 trillion economy target. Using predictive analytics, they can forecast sectoral growth, such as manufacturing's projected GDP contribution by 2047. A 2023 report noted that CMAs reduced operational costs by 15 per cent in 200 MSMEs,



enhancing competitiveness. By preparing Gantt charts and KPIs, CMAs ensure that sectoral progress aligns with Viksit Bharat's timeline.

2.2 Cost Management and Optimization

India's infrastructure push requires cost-effective execution. CMAs can apply activity-based costing to minimize waste, saving an estimated 10 per cent on healthcare projects like *PM-Ayushman Bharat*. In agriculture, CMA led cost audits for *PM Kisan Samman Nidhi* can reduce administrative costs by 10 per cent, ensuring direct benefits to farmers.

2.3 Risk Management

Global uncertainties, such as trade and tariff disruptions, threaten Viksit Bharat's goals. CMAs with their expertise in global financial markets can use risk assessment and risk management frameworks to mitigate financial risks. An Indian firm with risk strategies improved resilience during supply chain disruptions.

2.4 Data Analytics and Digital Transformation

Digitalization is reshaping accounting. CMAs leverage big data and AI, with 85 per cent of finance professionals using data-driven insights for decision-making (IFAC, 2024).

2.5 Sustainability and ESG Integration

Viksit Bharat emphasizes sustainability. CMAs integrate ESG metrics into financial strategy, risk management and reporting, with most of the Indian firms relying on experts like CMAs for carbon credit accounting, internal carbon pricing, ESG due-diligence, risk modelling, sustainable financing, implementing TCFD framework based reporting. ICAI's sustainability guidelines, including solar power installations, align with national goals like *Green Mahotsav*.

2.6 Governance and Transparency

CMAs' role in governance, through certificate courses for panchayat accountants can strengthen financial accountability at grassroots levels.

SECTION 3

CMAS AND THE FOUR PILLARS OF VIKSIT BHARAT

The four pillars of Viksit Bharat require tailored financial strategies, where CMAs play a transformative role.



3.1 Yuva (Youth)

India's 1 crore annual workforce entrants demand skilling and job creation. CMAs can support PMKVY by optimizing training budgets, by reducing per-trainee costs in SAMARTH Udyog Centres. By forecasting skill demands in AI and green tech, CMAs can align programs with Industry 4.0, projected to create 5 million jobs by 2035. The Viksit Bharat Young Leaders can leverage CMA insights to channel youth energy toward innovation.

3.2 Garib (Poor)

Financial inclusion is critical, with *Jan Dhan Yojana* empowering crores through banking access. CMAs can improve loan recovery rates in microfinance institutions through performance-based budgeting. Their cost-benefit analyses can ensure schemes like *PM Mudra Yojana*, with 28 crore beneficiaries, minimize leakages and maximize impact.

3.3 Mahila (Women)

Women's empowerment drives Viksit Bharat. CMAs can support women-led MSMEs, with higher profitability through cost optimization. Gender-responsive budgeting can enhance women's welfare programs like PMMVY.

3.4 Kisan (Farmers)

Agriculture sector, contributing 18 per cent to GDP, can benefit from CMA-led cost audits. For instance, PM Kisan Samman Nidhi's administrative costs can drop, directly benefiting farmers. CMAs can forecast commodity prices, boosting farmer incomes by up to 15 per cent in pilot projects through crop planning.

SECTION 4

FORECASTS AND FUTURE CONTRIBUTIONS OF CMAS

Cost and Management Accountants will play a transformative role in achieving Viksit Bharat 2047's \$30 trillion economy goal through technological integration, sustainability, and sectoral growth. Key forecasts include:

4.1 Technological Integration

By 2030, 90 per cent of Indian firms are expected to adopt AI-driven accounting tools. CMAs can leverage predictive analytics to reduce infrastructure project overruns by up to 15 per cent, saving Rs. 1.5 lakh crore annually by 2047 (projected from 2024 budget data). Digital Learning Campus will equip



CMAs with AI and blockchain skills, enhancing forecasting accuracy for sectors like fintech.

4.2 ESG and Global Standards

By 2047, 80 per cent of Indian firms will adopt ESG reporting, with CMAs ensuring compliance. This will attract \$500 billion in green investments, supporting initiatives like *Jal Jeevan Mission*. CMAs can align financial reporting with IFRS, boosting India's global competitiveness and enabling export growth from sustainable industries.

4.3 MSME and Startup Ecosystem

MSMEs, contributing 30 per cent to GDP, will drive Viksit Bharat's growth. CMAs can enhance MSME exports by up to 25 per cent by 2035 through financial restructuring. Their advisory role in startup incubators like SAMARTH Udyog will create 5 million jobs by 2047, fostering innovation in semiconductors and green tech.

4.4 Performance Evaluation

CMAs can develop KPIs and Gantt charts for Viksit Bharat projects, improving efficiency by 20 per cent by 2047 (*Business Standard*, 2025). Their audits will ensure timely completion of Rs. 18 lakh crore infrastructure projects, tracked via platforms like PRAGATI, aligning with the 8–10 per cent GDP growth target.

These forecasts position CMAs as architects of financial discipline, leveraging technology and global standards to drive inclusive growth. By addressing skill gaps and regulatory complexities, CMAs can ensure India's transformation into a developed, sustainable economy by 2047.

SECTION 5

CHALLENGES AND RECOMMENDATIONS

5.1 Challenges

- **Skill Gaps:** Only a small percentage of CMAs are proficient in advanced analytics, limiting digital capabilities.
- **Regulatory Complexity:** Frequent policy changes hinder financial planning.
- **Rural Data Access:** Limited real-time data in rural areas affects agricultural and MSME forecasting.
- **Cybersecurity:** Fintech growth raises cybersecurity risks, with 30 per



cent of firms reporting data breaches (EY, 2025).

5.2 Recommendations

- **Upskilling:** ICAI can partner with tech firms to train 80 per cent of CMAs in AI and blockchain by 2030.
- **Policy Advocacy:** Collaborate with NITI Aayog to streamline regulations, enhancing ease of doing business.
- **Data Infrastructure:** Expand 5G connectivity to rural areas to improve data access for CMAs.
- **Cybersecurity Frameworks:** Develop self-regulation guidelines for fintech, aligning with RBI's standards.

CONCLUSION

Cost and Management Accountants are indispensable to Viksit Bharat 2047, driving economic growth, social inclusion, and sustainability through strategic financial management. By embracing AI, ESG frameworks, and global standards, CMAs will save Rs. 2 lakh crore annually and drive 25 per cent of MSME growth by 2047. Their role in governance on panchayat training, ensures transparency. To maximize the impact, CMAs must address skill gaps and regulatory challenges through upskilling and advocacy. As India targets a \$30 trillion economy, CMAs can be the architects of financial discipline, ensuring a prosperous, equitable future for all.



VIKSIT BHARAT 2047 AND MANAGEMENT ACCOUNTANTS



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INTRODUCTION

India's GDP (Gross Domestic Product) at current prices is expected to be USD 4.19 trillion² with per capita GDP at USD 2,880 and real GDP growth rate at 6.2 per cent in 2025 as per International Monetary Fund (IMF) (IMF April 2025 estimate). How much will India's GDP be in 2047, the 100th year after independence? There are various estimates by experts. One estimate is USD 23-35 trillion³. India is likely to become third largest economy in the world with per capita GDP expected to be in the range of USD 15-20,000.

The economic transformation as mentioned above is the ambition of “Viksit Bharat 2047”. The enablers for this huge transformation are competitiveness in technology, greater skilled labour force, advanced manufacturing facilities and sustainable infrastructure.

How do the Management Accountants contribute in this major transformation of the Indian economy? They have a major supporting role, which is discussed in this article.

VIKSIT BHARAT 2047

‘Viksit Bharat’ means “Developed India.” The Government of India has a vision for our country to be achieved by the year 2047, which marks the 100th anniversary of our independence from the British rule. The vision is to make India a completely developed country. The mission is to have accelerated economic growth, technological upgradation, infrastructure development, social empowerment and sustainability. The focus is on the development of *yuva* (youth), *garib* (poor), *mahilayen* (women), and *annadata* (farmers).

Our Finance Minister, Smt. Nirmala Sitharaman in her Interim Budget of

² <https://www.imf.org/external/datamapper/profile/IND>

³ https://www.bain.com/globalassets/noindex/2025/bain_report_india_2047_transforming_india_into_a_tech-driven_economy.pdf

2025-26, announced certain priorities as part of the overall strategy for achieving Viksit Bharat 2047 - zero-poverty, hundred per cent good quality school education, access to high-quality, affordable and comprehensive healthcare, hundred per cent skilled labour with meaningful employment, seventy per cent of women in economic activities and farmers making our country the “food basket of the world”. The strategy is to significantly improve the physical infrastructure, exp and social welfare schemes, drive rapid economic growth, promote sustainable development of all sections of citizens especially the under-privileged and enhance ease of doing business.

How much should the real GDP growth rate be during the next two decades to achieve the ambitious economic and social goals as envisaged in the Viksit Bharat 2047 vision document? The Economic Survey 2024-25⁴ published by the Government of India notes thhs: *“To realise its economic aspirations of becoming Viksit Bharat by the time of the centenary of independence, India needs to achieve a growth rate of around 8 per cent at constant prices, on average, for about a decade or two.”* A quick calculation shows that the annual real GDP growth rate for the next 22 years (2025 to 2047) needs to be 8.0 per cent⁵ for USD 23 trillion GDP in 2047, 9.4 per cent per cent⁶ for USD 30 trillion and 10.1 per cent⁷ for USD 35 trillion.

Hence India will need around 8-10 per cent GDP growth rate every year till 2047 to achieve the Viksit Bharat 2047 vision.

The graph below shows India’s real GDP (in billion US dollars), decadal GDP growth rate (in percentage) and per capita GDP (in US dollars) till 2023 starting from 1960⁸. One can observe that India had 3 – 4 per cent GDP growth rate before liberalisation of the economy, which increased to 6-7 per cent post liberalisation in 1991. The major economic reforms of 1991 in India were significant shift towards liberalization, privatization and globalization. Major reforms took place in abolishing License Raj, privatisation, opening the Indian economy to foreign trade and investment, encouraging foreign direct investment (FDI), reducing barriers to international trade and reforms in the financial sector, taxation, legal and others.

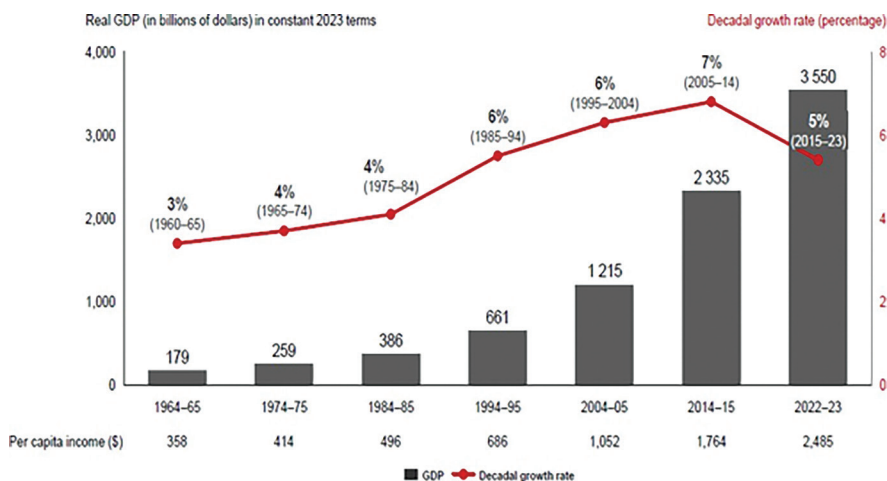
⁴ Economic Survey 2024-25 - <https://www.indiabudget.gov.in/economicsurvey/doc/echapter.pdf>

⁵ $= (23/4.19)^{(1/22)} - 1 = 8.0\%$

⁶ $= (30/4.19)^{(1/22)} - 1 = 9.4\%$

⁷ $= (35/4.19)^{(1/22)} - 1 = 10.1\%$

⁸ Bain & Company: India @2047: Transforming India into a Tech-Driven Economy



Source: Bain & Company

Thus we will need another 2 – 4 per cent increase in real GDP growth rate every year for the next 22 years. This is a formidable task for any economy and we will need major reforms, sizeable increase in investments, increase in consumption, creation of a large number of jobs and many others.

The Economic Survey 2024-25 says : *“To achieve this growth, the investment rate must rise to around 35 per cent of Gross Domestic Product (GDP) from the current 31 per cent. Additionally, it will be essential to develop the manufacturing sector further and invest in emerging technologies such as artificial intelligence (AI), robotics, and biotechnology. India will also need to create 7.85 million new non-farm jobs annually till 2030, achieve 100 per cent literacy, improve the quality of education institutions, and develop high-quality, future-ready infrastructure at scale and speed.”*

ROLE OF MANAGEMENT ACCOUNTANTS

A Management Accountant’s responsibilities can vary, but mostly include the preparation of monthly management accounts and other financial reports such as budgets. They frame strategies that will reduce cost of running any business. Management accounting provides financial information to an organization’s internal management for informed decision-making and to improve operational and financial performance.

Business organisations may vary a lot since their activities may be different and sometimes unique. The role of the Management Accountants, as such, may



also vary depending on the nature of business of the enterprises they work in.

Ronald Hilton⁹ mentions that Management Accountants play vital role in business organizations by undertaking additionally some of the following activities.

- a. They examine the competitiveness of a firm and work with the organizational leadership to analyse the ways and means to maintain competitiveness in the industry.
- b. They are engaged to evaluate performance evaluation of various business activities.
- c. They provide appropriate information for managerial decision making and planning.
- d. They assist managers to direct and control operational activities.

Essentially the Management Accountants provide all relevant information for planning, directing and controlling various activities in business organizations.

In fact, the vision of the management accounting profession mentions that the Cost and Management Accountants (CMAs) would be the preferred source of resources and professionals for the financial leadership of enterprises globally. And their core strengths include (a) Building cost effectiveness (b) Business analytics, strategy & sustainability (c) Auditing and assurance (d) Business valuation & product pricing (e) Cost-benefit analysis (f) Enterprise governance (g) Effective regulatory compliance (h) Benchmarking (i) Cost & management accounting (j) Financial management (k) Direct & Indirect tax management and (l) Management control systems.

MANAGEMENT ACCOUNTING INFORMATION AS ASSET

Any information enhances knowledge and accounting information system changes the way individuals think leading to systematic understanding of the parameters which helps in sound business decision making. As such, any information including management accounting information is an asset to managers.

Buljubašić & Ilgün, (2015)¹⁰ mention that Information is vital to the effective functioning of an organisation because managers can make rational decisions with the help of information, which contribute towards the performance and growth of the organization. This is rational because managers usually have alternatives and proper information will lead to the right choice.

Regarding the role of management accounting in enterprise decision making,

⁹ Ronald Hilton, *Managerial Accounting*, 7th. edition

¹⁰ Buljubašić, E., & Ilgün, E. (2015). Impact of Accounting Information Systems on Decision Making Case of Bosnia and Herzegovina. *European researcher. Series A*, (7), 460-469.



Greenberg & Baron (2008)¹¹ summarise that business decision making is not done in a random manner, but through a process of selecting one out of a choice of alternative courses of action. Management accounting is a key component in assessing the alternatives.

In fact, management accounting information is a competitive asset. Fahey (2009)¹² notes that markets, businesses, and economies have become more complex. Consumers are continuously subjected to a lot of sophisticated changes. This makes business decision making more complex and the Management Accountants with additional knowledge of business analytics can play a vital role in helping managers decide on the best course of action for the firm.

ENTERPRISE VALUE AND MANAGEMENT ACCOUNTANTS

Enterprise value is the total value of a firm and is defined as the sum of the market capitalisation and the market value of debt less the value of cash and cash equivalents. Another way is to estimate the sum of the present values of the free cash flows of the business over a planning horizon and the terminal value of the business at the end of the planning horizon.

Management Accountants can play a crucial role in increasing the enterprise value of a business by providing data-driven insights into prices and volumes of saleable outputs and inputs of materials, labour, and other items relevant to the business. Especially they can provide decision support to strategic planning, investment decisions and pricing strategies. They can help in cost management including cost reduction, cost control and activity-based costing. Management Accountants undertake performance measurement defining key performance indicators (KPIs), variance analysis and benchmarking. Their other roles include risk management covering financial risk analysis and operational risk management. Also Cost and Management accountants are responsible for setting up internal control systems, fraud detection and data integrity.

SUSTAINABILITY AND MANAGEMENT ACCOUNTANTS

UN World Commission on Environment and Development defines sustainability as '*meeting the needs of present generations without compromising the ability of future generations to meet their own needs.*'

ESG (Environmental, Social and Governance) essentially refers to a set of practices that business organizations need to follow to limit negative impact and/or enhance positive impact on the environment,

¹¹ Greenberg, J. & Baron, R., 2008. *Behavior in Organizations*. 9th Edition. Upper Saddle River: Prentice Hall

¹² Fahey, L., 2009. Exploring "analytics" to make better decisions – the questions executives need to ask. *Strategy & Leadership*, 37(5), pp. 12-18.



society, and governance bodies. ESG is a subset of sustainability.

Organizational ESG score has become more important because socially conscious investors make their investments based on ESG score.

CMAs can provide active support in improving the ESG score in an organization. They can assist by arranging relevant financial and non-financial information to various stakeholders, assign costs to negative impacts on ESG and help organizations to implement ESG goals by monitoring business processes.

CONCLUSION

As discussed above, Viksit Bharat is achievable by 2047 if we can increase our real GDP growth rate by additional 2 per cent and more on a sustained basis for the next two decades. This will necessitate increased public investment and a substantial boost in private sector investment, with a focus on infrastructure, manufacturing, and emerging technologies.

CMAs can play a very significant role by providing financial and non-financial information and analysis in business organizations to achieve the strategic goals.

It is rightly said that “*Behind every successful business decision, there is always a CMA.*”



COST ACCOUNTANTS IN INDIA: VISION 2047



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As India approaches its 100th year of independence in 2047, the accounting profession stands at a pivotal juncture. Among its key contributors, cost accountants are poised to transition from cost controllers to strategic value creators. With India projected to become the third-largest economy globally by 2028, and a \$30 trillion economy by 2047 (as per EY and CII estimates), cost accountants will play a central role in navigating the complexities of this growth.

• **From Compliance to Strategy**

Cost accountants have traditionally focused on income tax, GST, budgeting, and statutory compliances. However, by 2047, their role will expand significantly into business strategy and public policy. In an environment where the Indian government's capital expenditure is projected to exceed ₹10 lakh crore annually, cost accountants will be vital in ensuring value-for-money, assessing the financial viability of infrastructure projects, and curbing fiscal inefficiencies across sectors.

• **The Age of AI-Driven Costing**

With AI expected to add \$1.2 trillion to India's GDP by 2035 (as per NITI Aayog and PwC), cost accountants will no longer rely on retrospective analysis. AI will enable predictive costing models, real-time variance analysis, and dynamic simulations. Intelligent systems will assist in anomaly detection, fraud prevention, and margin optimization—freeing professionals to focus on higher-value strategic work.

For instance, automation can reduce time spent on manual reconciliations by up to 80%, allowing cost accountants to become decision-support analysts

rather than just record-keepers.

- **Sustainability at the Forefront**

India is committed to achieving net zero emissions by 2070, and companies are already under pressure to report their ESG performance. Cost accountants will pioneer ESG cost mapping, carbon costing, and lifecycle-based sustainability reports. According to a McKinsey study, companies with high ESG performance show up to 20% lower cost of capital—underscoring the financial value of sustainability initiatives.

India's development journey over the next two decades will be defined by how efficiently it balances growth with sustainability. Cost accountants will take center stage in this transition, leading ESG (Environmental, Social, Governance) measurement, carbon cost accounting, and lifecycle costing. Their role will be critical in helping companies comply with global sustainability norms while remaining profitable.

- **From Multilateral to Bilateral and Supply Chain**

As the world transitions from a multilateral to a more bilateral framework, countries will need to swiftly recalibrate their strategies for international engagement. Each nation may have to adopt a differentiated pricing strategy to suit its bilateral relationships. Furthermore, global supply chains have been significantly disrupted—initially by the COVID-19 pandemic and more recently by sanctions and China's monopolistic control over essential materials. For instance, China's recent restrictions on the export of magnets, fertilizers, and other critical inputs have led to supply shortages, driving up the costs of various products due to constrained availability of raw materials and components

- **Data as the New Currency**

India's data universe is growing at a CAGR of over 40%, and by 2047, real-time data will drive business decisions. Cost accountants will use tools like Power BI, Tableau, and AI-enhanced ERP systems to convert raw data into operational intelligence. The integration of cost accounting with advanced analytics will help businesses uncover product-level profitability, resource bottlenecks, and cost improvement opportunities—instantaneously.

- **Global Reach through GCCs**

India currently hosts over 1,900 Global Capability Centers (GCCs), employing more than 1.5 million people. By 2047, this number is expected to grow



substantially, as India becomes the global hub for outsourced knowledge work. Cost accountants will lead cost efficiency initiatives, resource allocation, and strategic performance measurement across these global networks. Their understanding of cross-border regulations, transfer pricing, and performance benchmarking will make them irreplaceable.

• **Empowering the MSME Backbone**

The MSME sector contributes nearly 30% to India's GDP and employs over 110 million people. Yet, financial inefficiencies plague many small enterprises. Cost accountants will guide MSMEs in unit costing, working capital management, and financial structuring. Their intervention can directly impact competitiveness, particularly as MSMEs seek to integrate with global supply chains and meet sustainability benchmarks.

• **A Culture of Continuous Learning**

As automation and digitization reshape the profession, continuous upskilling will be crucial. Institutes will embed courses in AI, machine learning, behavioral finance, and sustainability reporting. Future-ready cost accountants will blend core accounting knowledge with digital literacy and strategic insight. According to the World Economic Forum, 50% of all employees will need reskilling by 2027—a shift cost accountants must embrace early.

• **A Seat at the Decision-Making Table**

The boardrooms of 2047 will demand professionals who can interpret complexity and recommend financially sound, ethical, and sustainable decisions. Cost accountants, with their unique combination of operational insight and financial rigor, will find themselves on audit committees, ESG boards, and CFO successions. They will not just influence business direction—they will help shape it.

Conclusion

By 2047, the Indian cost accountant will no longer be confined to ledgers or spreadsheets. They will be strategic thinkers, AI-powered analysts, ESG champions, and global advisors. In a \$30 trillion economy marked by speed, sustainability, and complexity, cost accountants will become the architects of financial intelligence—ensuring India's growth is not just rapid, but responsible and resilient.

CMAs - THE CATALYSTS FOR GLOBAL LEADERSHIP IN COMPETITIVE ADVANTAGE - NAVIGATING ‘VIKSIT BHARAT’ - 2047: AN EMPIRICAL STUDY



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“Management Accountants are no longer just the scorekeepers—they are the navigators of the business.” — RICHARD MALMGREN¹

ABSTRACT

This empirical study explores the pivotal role of Cost and Management Accountants (CMAs) as strategic enablers of global leadership and competitive advantage in shaping ‘Viksit Bharat’ by 2047. Highlighting their contributions in value creation, governance, and sustainable growth, the paper positions CMAs as catalysts driving India’s economic transformation. Through data-driven insights, it underscores the relevance of CMAs in navigating complex business ecosystems and fostering a globally competitive, future-ready nation.

1. INTRODUCTION

As India pursues its goal of becoming a developed nation by 2047— ‘Viksit Bharat’— 360° holistic leaderships must evolve to support a globally competitive and innovation-led economy. Cost and Management Accountants (CMAs) are well-suited to lead this shift, offering expertise in cost control, strategic planning, performance measurement and sustainability. *Kaplan and Norton’s (1996) Balanced Scorecard study revealed that organizations leveraging both financial and non-financial metrics are more competitive and adaptable. Likewise, a CIMA–AICPA (2014) report noted that over 75*

¹ Richard Malmgren served as President of the Institute of Management Accountants (IMA), USA, during the late 20th century, where he played a pivotal role in promoting the strategic relevance of Management Accountants in modern business. Under his leadership, IMA advanced the idea that Management Accountants are “navigators” of the business, not merely scorekeepers. Though detailed personal and academic records remain undisclosed publicly, Malmgren’s advocacy significantly influenced the evolution of cost and management accountancy as a profession focused on decision support, strategic planning, and value creation, aligning closely with global competitiveness and business transformation.



per cent of high-performing companies credit finance professionals with aligning cost insights to long-term value creation.

CMAs, therefore, are crucial in aligning enterprise strategies with national programs like Make in India, Digital India, and *Atmanirbhar Bharat*. Their role has been evolved through metamorphosis to expand beyond traditional cost accounting and management reporting to include policy formulation and implementation, fiscal responsibility, and performance analytics in both corporate and public governance beyond beyond the international borders

In the digital era coupled under technological disruption, CMAs integrate ESG goals, risk controls, and technology into strategic decisions. By promoting cost efficiency, innovation, and transparent governance, they enable enterprises to compete globally. As Malmgren emphasized, CMAs now guide economic direction—acting as value creators and ethical leaders—steering India towards a resilient and inclusive Viksit Bharat (Developed India) by 2047 assuming global leadership.

1.1 Problem Statement

Despite India's 2047 vision, CMAs remain underutilized as strategic enablers. Globally, they drive high-level decisions, but in India, they're often limited to compliance roles. This disconnect impedes agility and growth. The study explores CMAs' potential to align with national goals and boost competitiveness and sustainable development and explores how India emerges to be a global leader in innovation, providing skilled human resource by imparting quality education and training under the mandate of the National Education Policy (NEP) 2020 to economically empower the young workforce enabling India to become 'Vishvaguru' to beacon the world with persistent innovation knowledge and wisdom.

1.2 Research Gap

While the existing literature highlights CMAs' roles in cost control, performance evaluation, and strategic planning, few empirical studies examine these within a unified strategic cost management framework aligned to India's Viksit Bharat 2047 vision. CMAs' contributions are often viewed in isolation, not as drivers of national growth. This research addresses the gap by exploring how CMAs can integrate technical skills with strategic goals to enhance competitiveness and sustainability in India's evolving economic landscape and make her emerge to be a global leader.

1.3 Objectives

1. To assess how CMAs identify and quantify organizational waste to

enhance cost efficiency and resource optimization.

2. To evaluate the effectiveness of CMA tools in planning, control, decision-making, and performance measurement
3. To develop a strategic cost management model suited to India's context, enabling organizations to gain sustainable competitive advantage in alignment with the Viksit Bharat 2047 vision of transforming India into a global economic leader.

1.4 Research Questions

1. What cost and management accounting practices do CMAs use to measure and report organizational waste, and how do this impact operational efficiency to fruition competitive advantage globally ?
2. How effective are tools like activity-based costing, balanced scorecard and lifecycle costing in supporting CMAs' strategic and operational roles?
3. Which CMA functions most significantly enhance organizational competitiveness?
4. What challenges hinder CMAs from aligning with Viksit Bharat 2047 goals?
5. How can a strategic cost management model position India as a global leader transformed by CMAs by dint of their specialized professional education and training by 2047?

1.5 Null Hypotheses

H₁: No significant correlation exists between monetizing organizational waste and CMAs' role in gaining competitive advantage.

H₂: Cost and management accounting practices do not significantly influence competitive advantage transforming Viksit Bharat 2047 to global leadership position.

H₃: Effectiveness of CMA tools lack a significant link to strategic decision-making in advancing national development goals aligning to global benchmark.

1.6 Scope

This study explores the strategic role of CMAs in driving India's journey toward global leadership and competitive advantage, in alignment with the Viksit Bharat 2047 vision. It focuses on CMAs' contributions in cost control, waste monetization, and strategic decision-making across sectors such as infrastructure, logistics, transport, telecommunications, agriculture, startups, MSMEs, and environmental sustainability. Emphasizing the 'People, Planet,



and Profit’ framework, the study extends beyond national borders to assess how CMAs can influence global competitiveness. The scope includes a quantitative, empirical evaluation of CMA practices within mainstream industry, trade, and commerce to support holistic economic transformation navigating India in the runway of global leadership

1.7 Significance

This study underscores CMAs’ strategic role in advancing Viksit Bharat 2047 by validating their impact on competitiveness. It highlights the importance of integrating CMA expertise into governance, policy and industry to boost efficiency, transparency, and performance, aiding stakeholders in data-driven decisions and fostering strategic cost leadership.

2. LITERATURE REVIEW

In empirical research, literature reviews serve to identify knowledge gaps, align the study with theoretical frameworks and ensure methodological soundness. They shape hypotheses and validate the research’s academic relevance.

2.1 Competitive Advantage through Strategic Cost Management

Strategic Cost Management (SCM) is increasingly becoming vital for sustaining competitive advantage in global markets. Key studies by *Kaplan and Norton (1997)*, *Shank and Govindarajan (1993)*, and *Seidenschwartz (1993)* highlight SCM’s strategic value. Life Cycle Costing (*Cooper & Kaplan, 1998; Hansen & Moeen, 2000; Goeze, 2004*) and modern tools (*Pong & Mitchell, 2005*) support long-term planning. *Porter (1985)*, *Kajüter (2000)*, *Horngren (2003)*, and *Blocher et al. (2010)* emphasize CMAs’ strategic business role.

2.2 Cost and Management Accountants’ Practices

CMAs play a critical role in shaping strategic decisions that lead to competitive advantage. *Kaplan and Norton’s (1992)* Balanced Scorecard (BSC) demonstrate how integrating financial and non-financial metrics—such as budgeting, performance evaluation, and information systems—can drive better management outcomes. *Cooper and Kaplan (1988)* introduced Activity-Based Costing (ABC), enhancing accuracy in cost control, value chain analysis, and regulatory compliance. These tools, widely implemented across global firms, improve transparency, efficiency, and strategic clarity. Techniques like Linear Programming and Planning (LPP) further enhance

firms' adaptability and sustainable growth. *Horvath and Aschenbrucker (2015)*² observed a significant paradigm shift in CMAs' roles, aligning their evolving practices with information needs and strategic decision-making.

2.3 Management Accounting Tools for Achieving Competitive Advantage

CMAs employ sophisticated tools to support strategic functions including cost management, profitability analysis and decision-making. ABC enhances cost precision and resource alignment, as highlighted by *Al-Omiri and Drury (2020)*, while *Al-Mawali et al. (2018)* found it effective in pricing and export market profitability. The BSC boosts strategic alignment; *Muda et al. (2018)* showed financial performance gains in Malaysian firms, while *Hoque (2014)* emphasized balanced monitoring across dimensions.

Value chain analysis as per *Koc and Bozdag (2017)*, improved Turkish textile competitiveness; *Nassar et al. (2019)* reported profit margin gains in logistics. *Østergren and Stensaker (2011)* endorsed beyond budgeting for agility, and *Elbashir et al. (2011)* linked IT forecasting to ROI tracking. Quality tools like TQM and QCM, validated by *Kaynak and Hartley (2018)* and *Phan et al. (2020)*, elevate quality and satisfaction. Collectively, these tools position CMAs as pivotal to economic transformation under Viksit Bharat 2047

2.4 Definition and Scope of Cost and Management Accounting (CMA) Functions

CMA involves collecting, analysing, and interpreting financial and non-financial data to support planning, decision-making and performance evaluation. It empowers managers with insights for operational control and strategic alignment.

Ittner & Larcker (2001) showed that management accounting integrates non-financial metrics like innovation and customer satisfaction, expanding its strategic scope. *Kaplan & Norton (1996)* emphasized aligning management accounting with organizational strategy via the Balanced Scorecard. *Bhimani et al. (2012)* confirmed that modern CMA includes forecasting, scenario planning and risk management, enabled by analytics. *Chenhall & Langfield-Smith (2007)* highlighted CMA's role in driving innovation through tools like ABC and TQM. *Nørreklit et al. (2010)* added that CMA fosters communication and context-driven decisions, enhancing coordination across units.

*Gebhardt, Grimm and Neugebauer (2015)*³ argued in their study that cost and management accounting is an important function in any organization's

² Horvath P., and Aschenbrucker A.(2015) "Data Scientist: Der Data Scientist-neue Potentiale für den Controller in: Controlling im digitalen Zeitalter?" pp.45-49

³ Gebhardt J., Grimm A. and Neugebauer, "Development 4.0 Prospects on Future Requirements and Impacts on Work, Variational Education", 2015, pp.117-133



economic activities involving devising planning, performance management and management's decision making, providing expertise in management control and reporting in order to facilitate management in strategy formulation and implementation (*Siegel and Sorensen*(1999)⁴ Together, these studies define CMA as a dynamic, strategic function—critical for achieving competitiveness in today's volatile global landscape.

2.5 CMAs for Achieving Competitive Advantage

CMAs drive sustainable growth and value creation through strategic tools like cost analysis and risk management. *Burns and Vaivio* (2001) viewed them as innovation partners; *Drury* (2013) highlighted their role in transparent costing. *Goretzki et al.* (2013), *Verbeeten* (2011), and *Schaltegger & Zvezdov* (2015) confirmed impacts on agility, performance, and s

2.6 CMAs as Catalysts for 'Viksit Bharat :2047'

Achieving Viksit Bharat 2047 demands strategic leadership, where Cost and Management Accountants (CMAs) play a vital role in economic transformation. *Sharma and Ghosh* (2020) found CMAs improved efficiency in public enterprises via audits and benchmarking. *Rao and Jain* (2021) showed CMAs aiding MSMEs and startups through pricing strategies and cost control. *Kumar and Mehta* (2019) highlighted their impact on GST implementation and fiscal accountability.

Chakraborty et al. (2023) linked CMAs to smart governance via analytics and forecasting. *Reddy and Thomas* (2022) observed better global and supply chain performance in CMA-led firms. *Elbashir et al.* (2011) noted that Throughput Accounting and VCA improve public resource allocation. *Joshi et al.* (2015) credited CMAs with MSME grassroots support, while *OECD* (2021) linked CMA transparency to increased FDI. *Kaplan and Norton* (2004) emphasized their accountability role via dashboards. Thus, CMAs are not just financial experts—they are strategic nation-builders essential for India's \$30 trillion economic vision.

3. THEORETICAL FRAMEWORK AND RESEARCH DESIGN

The theoretical framework provides the conceptual grounding for the study, aligning research variables with key theories and guiding the formulation of hypotheses and research questions. The research design outlines the systematic approach adopted for data collection, sampling, and analysis, ensuring validity, reliability, and alignment with the study's objectives.

⁴ Siegel G., and Sorensen J., "Counting More, Counting Less: Transformations in the Management Accounting Profession", Institute of Management Accountants(IMA), USA



3.1 Data

Data was collected using a structured Likert-scale questionnaire administered to 385 respondents (see Appendix). The survey was distributed via Google Forms, email, and direct outreach through professional bodies and forums like ICAI, CIMA, and IMA. Only validated, fully completed responses were included in the final dataset to ensure analytical reliability and consistency.

3.2 Population

The target population consists of CMAs, CPAs, CAa CSs, Professors, Researchers, financial controllers strategic decision-makers, bureaucrats, lawmakers, judicial administrators across diverse economic sectors and the population was treated as infinite for sample size estimation purposes.

3.3 Sampling Technique

A purposive (judgmental) sampling method was employed to ensure that only professionals with relevant expertise and experience in cost and management accounting were selected. This non-probability approach is suitable for obtaining specialized insights from individuals operating in strategic and technical domains directly related to CMA functions.

3.4 Sample

The sample size (n) is determined using technique for drawing sample from an infinite population such as: $n = \frac{Z^2 \times P \times (1-P)}{e^2}$ when $Z = Z$ value (1.96 for 5 per cent confidence level), $P =$ Assumed proportion of the population (0.5) for maximum variability and $e =$ Margin of error (5 per cent of 0.05). $n =$ Sample Size i.e., $[(1.96)^2 \times 0.5 \times 0.5] / (0.05)^2$ i.e. $[3.8416 \times 0.25] / 0.0025$, i.e. $[(0.9604) / (0.0025)] = 384.16$, rounded up to 385 is the sample size.

3.5 Statistical Techniques

To assess the relationship between CMAs' practices and competitive advantage within the vision of Viksit Bharat 2047, various statistical methods will be employed to test hypotheses and validate the study.

Descriptive Statistics

Measures such as mean, standard deviation, variance and frequency will summarize demographic profiles and respondents' views on CMA practices like cost control, waste measurement, and strategic integration.



Reliability and Validity Testing

Cronbach's Alpha will assess the internal consistency of the Likert-scale questionnaire. Factor analysis may be used to confirm construct validity by clustering related variables under coherent dimensions.

Correlation Analysis

Pearson's Correlation Coefficient will evaluate the strength and direction of association between CMA practices (e.g., waste measurement) and competitive advantage.

Multiple Linear Regression (MLR)

MLR will analyse the statistical impact of key CMA activities (cost optimization, quality management, value chain analysis) on competitive advantage, helping estimate CMAs' influence on development goals for 2047. Model fit indicators— R^2 , Adjusted R^2 , F-statistic, and p-values—will determine the explanatory power.

ANOVA

Used to test the differences across CMA roles, industries and regions regarding the perception and impact of CMA practices.

Chi-Square Test

This non-parametric test assesses the association between categorical variables like CMA roles- strategic vs. compliance and perceived impact, or sectoral differences in tool adoption.

Assumption Testing

To ensure robust regression analysis, assumptions of normality, multicollinearity, homoscedasticity and autocorrelation will be tested

4. RESULTS AND DISCUSSION

This section presents key empirical findings, linking them to the theoretical framework and literature. It interprets data trends, highlights the strategic role of CMAs in fostering competitive advantage and evaluates their impact on economic transformation, particularly in navigating toward the goals of 'Viksit Bharat by 2047' navigating India to the league of global leadership.

4.1 Descriptive Statistics

DESCRIPTIVE STATISTICS MATRIX

<i>Variable Code</i>	<i>Variable Description</i>	<i>Mean (μ)</i>	<i>Std. Dev (σ)</i>	<i>Minimum</i>	<i>Maximum</i>
Q5	Measuring Waste Practices	4.12	0.72	2	5
Q10	Use of Activity-Based Costing	3.91	0.83	1	5
Q15	CMAs' Strategic Role in Decision-Making	4.27	0.69	2	5
Q18	CMAs and Competitive Position	4.08	0.75	1	5
Q23	CMA Role in Viksit Bharat 2047	4.33	0.64	2	5

4.2 Reliability and Validity Testing Matrix

Cronbach's Alpha (All Sections Combined)	$\alpha = 0.87$	✓ Acceptable Reliability
Kaiser-Meyer-Olkin (KMO):	0.81	✓ Acceptable Reliability
Bartlett's Test of Sphericity: $\chi^2(190) = 2185.32$	$p < 0.001$	✓ Factorable

KMO = 0.812, Bartlett's Test $p < 0.001$ – Factorability confirmed.

4.3 Factor Analysis Summary Matrix

<i>Components</i>	<i>Eigenvalue</i>	<i>% of Variance</i>	<i>Cumulative</i>
Strategic Practices	3.75	41.60%	41.60%
Cost Management Tools	2.25	25.00%	66.60%
Waste Management and Operations Management Contributions	1.48	16.40%	83.00%

4.4 Correlation (Pearson's r) Matrix

<i>Variable</i>	<i>Q5-WM</i>	<i>Q10-ABC</i>	<i>Q15-Strat.</i>	<i>Q18-Comp.</i>	<i>Q23-VB</i>
Q5-Waste Management (WM)	1.00	0.49	0.52	0.56	0.50



Q10-ABC	0.49	1.00	0.58	0.60	0.47
Q15-Strategic Role (Strat.)	0.52	0.58	1.00	0.71	0.64
Q18- Competitive Advantage (Comp.)	0.56	0.60	0.71	1.00	0.66
Q23-Viksit Bharat - 2047 (VB2024)	0.50	0.47	0.64	0.66	1.00

Note: All correlations significant at $p < 0.01$

4.5 Chi-Square Test of Independence (Key Variables) Matrix

<i>Crosstab Variable</i>	χ^2 <i>Value</i>	<i>df (degree of freedom)</i>	<i>p-value</i>	<i>Interpretation</i>
CMA Role (Strategic vs. Operational) \times Sector	18.73	4	0.0009	Significant association
CMAs expertise & Involvement \times Use of ABC	13.61	2	0.0011	Significant association
Use of BSC \times Competitive Advantage	21.89	3	0.0002	Strong relationship between variables

4.6 Multiple Linear Regression Analysis

The Multiple Linear Regression Analysis identifies and quantifies the relationship between CMA practices and indicators of competitive advantage. It demonstrates how variables like cost control, strategic planning and performance metrics significantly influence organizational success, reinforcing the CMA's role as a critical driver in achieving Viksit Bharat 2047 objectives and making India holistically emerge as a global leader .

4.6.1 Model Summary

Dependent Variable (Y): Competitive Advantage (Q18)

Independent Variables (X):

X_1 = Measuring Waste (Q5)

X_2 = ABC Usage (Q10)

X_3 = Strategic Role (Q15)

REGRESSION MODEL

<i>Model</i>	<i>R</i>	<i>R</i> ²	<i>Adj. R</i> ²	<i>F</i> - <i>statistic</i> (<i>df</i> =3, 381)	<i>p</i> - <i>value</i>
Leaner Regression	0.755	0.570	0.565	168.94	<0.001

4.6.2 Regression Coefficients Matrix

<i>Predictor Variable</i>	<i>Unstandardized</i> (β)	<i>Standard</i> <i>Error</i> (SE)	<i>Unstandardized</i> (β)	<i>t</i> - <i>value</i>	<i>p</i> - <i>value</i>
Constant	1.004	0.201	-	4.995	<0.001
Q5-Measuring Waste	0.293	0.067	0.248	4.37	<0.001
Q10-ABC Usage	0.929	0.071	0.256	4.49	<0.001
Q-15-Strategic Role of CMAs	0.412	0.065	0.363	6.34	<0.001

4.6.3 Model Fit and Assumption Testing Matrix

<i>Test Type</i>	<i>Test & Value</i>	<i>Result & Interpretation</i>
Normality (Kolmogorov-Smirnov)	p = 0.200 (NS)	✓ Residuals Normally Distributed
Multicollinearity (VIF)	VIF (All < 2.0)	✓ No Multicollinearity
Durbin-Watson	DW = 1.91	✓ No Autocorrelation
Homoscedasticity	Scatterplot of residuals	✓ No heteroscedasticity visually detected
Linearity	Partial regression plots	✓ Relationship between predictors and outcome

4.6.4 Multiple Linear Regression Model

Y (Competitive advantage) is the function of X_1 [Measuring waste in monetary value (Q5)], X_2 [Usage of activity-based costing (ABC), (Q10)], X_3 [Strategic role of CMAs in decision-making (Q15)] and ε ([epsilon] representing Error term (residual unexplained variation)) i.e.

Y = Competitive advantage: As perceived outcome

X_1 = Measuring waste in monetary Value (Q5)

X_2 = Usage of activity-based costing (ABC) (Q10)

X_3 = Strategic role of CMAs in decision-making (Q15)

ε = Error term (residual unexplained variation)



4.6.5 Regression Equation Model and Interpretation

$$Y = 1.004 + 0.293X_1 + 0.319X_2 + 0.412X_3 + E \text{ (EPSILON)}$$

Interpretation of the Model

Intercept (1.004): Even when all independent variables are neutral (value = 0), the baseline perceived competitive advantage score starts at 1.004.

Measuring Waste (X_1): For every unit increase in effectiveness of waste measurement by CMAs, the competitive advantage improves by 0.293 units, holding other factors constant.

ABC Usage (X_2): Implementation of ABC leads to an average increase of 0.319 in competitive advantage score.

Strategic Role (X_3): When CMAs are more involved in strategic decisions, the impact on competitive advantage is the highest at 0.412 units, indicating this is the strongest predictor.

4.6.6 Testing of Hypotheses, Achievement of Objectives, and Addressing Research Questions

HYPOTHESIS TESTING OVERVIEW MATRIX

<i>Hypothesis Statement</i>	<i>Statistical Test Used</i>	<i>Results</i>	<i>Inference</i>
H1(Null): There is no statistically significant correlation between measuring wastes and CMAs' practices in achieving competitive advantages.	Pearson's Correlation & Regression	$r = 0.56, p < 0.01$ $\beta = 0.293, p < 0.001$	✗ Rejected – significant positive relationship exists
H2 (Null): There is no statistically significant impact of CMA practices in achieving competitive advantages and navigating 'Viksit Bharat'	Multiple Linear Regression	$R^2 = 0.570, F = 168.94, p < 0.001$	✗ Rejected – CMA practices significantly impact competitive advantage
H3(Null): CMA strategic roles, waste measurement, and ABC tools have no significant combined effect on competitive advantage.	Regression Coefficients & Model Fit	All predictors significant ($p < 0.001$), adjusted $R^2 = 0.565$	✗ Rejected – all predictors significantly contribute jointly

4.6.7 Linking Hypotheses to Objectives

<i>Objectives</i>	<i>Related Hypotheses</i>	<i>Status</i>	<i>Supported by</i>
1.To examine the CMAs' practices in measuring waste in monetary value	H1	☑ Achieved	Correlation ($r = 0.56$) and Regression ($B = 0.293$, $p < 0.001$) show significant impact
2. To study the effectiveness of management accounting tools in CMA tasks	H2	☑ Achieved	Regression shows ABC and strategic roles are significant predictors ($p < 0.001$)
3. To determine a strategic cost management model for competitive advantage towards Viksit Bharat	H3	☑ Achieved	Final regression model explains 57% variance ($R^2 = 0.570$), significant model fit

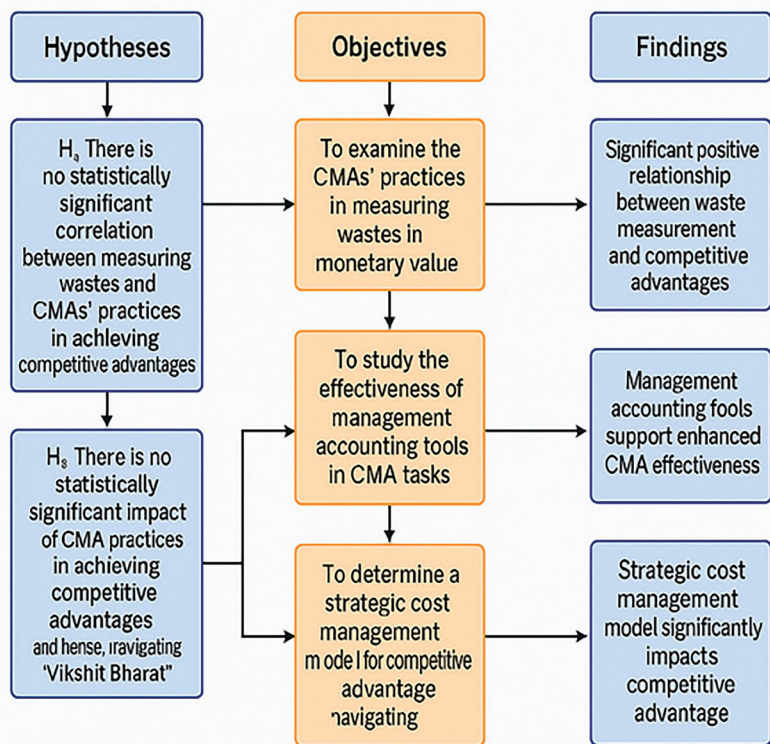
4.6.8 Answering Research Questions

<i>Research Question</i>	<i>Answered Through</i>	<i>Findings</i>
1. How effectively do CMAs measure organizational wastes in financial terms?	Descriptive stats (Q5), Correlation, Regression	Mean = 4.12; significant correlation with competitive advantage ($r = 0.56$)
2. To what extent do management accounting tools improve task performance and decision-making by CMAs?	Regression (ABC and strategic role), Reliability & Validity tests	Tools like ABC and BSC improve decision accuracy and strategic alignment
3. What is the relationship between CMA practices and competitive advantage?	Hypotheses H1, H2 – Correlation and Regression	Strong positive relationship; strategic CMA roles critical
4. What strategic cost management components influence CMA effectiveness in navigating Viksit Bharat 2047?	Regression Coefficients Table	Strategic role ($\beta = 0.363$) strongest driver; followed by ABC and waste management

5. What cost management model can be framed to guide CMAs as catalysts for national development?	Final Regression Model	$Y=1.004+0.293X_1+0.319X_2+0.412X_3+\epsilon$
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4.6.9 Synoptic View of Competitive Advantage Model Enabling India Emerge as Global Economic Leader - 2047

Cost & Management Accountants (CMAs)–the Catalysts for Competitive Advantage–Navigating ‘Vikshit Bharat’-2047: An Empirical Study



5. CONCLUSION

5.1 Synthesis of Evidence

All three null hypotheses were statistically rejected, confirming that CMA-led waste measurement, advanced tool application and strategic involvement significantly enhance competitive advantage. The study successfully fulfilled

its objectives and addressed all research questions through quantitative analysis. The developed regression model provides a policy-relevant structure positioning CMAs as pivotal agents in India's transformation toward Viksit Bharat 2047.

5.2 Policy Implications

Findings underscore that CMAs' strategic roles—particularly in waste valuation and use of tools like ABC—significantly contribute to competitiveness. Policy interventions should integrate CMAs into strategic roles beyond compliance. Respondents advocated utilizing CMAs' full potential in national development, suggesting broader inclusion in strategic governance to support India's global leadership ambitions and inclusive growth agenda under Viksit Bharat 2047.

5.3 Limitations and Future Direction

This study's reliance on self-reported data and purposive sampling limits sector-wide generalization. It also excludes analysis of AI and emerging tech in CMA functions. Future research should adopt longitudinal and cross-sectoral designs, incorporate a wider respondent base, and explore digital technologies' role in enhancing CMA impact within India's evolving regulatory and innovation landscape toward 2047 goals

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APPENDIX: QUESTIONNAIRES

“CMAs-the Catalysts for Global Leadership in Competitive Advantage-Navigating ‘Vikshit Bharat’-2047: An Empirical Study”

Response Scale (Likert 5-Point):

1 – Strongly Disagree | 2 – Disagree | 3 – Neutral | 4 – Agree | 5 – Strongly Agree

Section A: Respondent Profile (for Chi-Square / ANOVA Cross-tabulations)

1. Your designation:

☐ CMA Practitioner ☐ CFO ☐ Financial Analyst ☐ Consultant ☐ Other:

2. Sector of Employment:

☐ Manufacturing ☐ Services ☐ Government ☐ Public Sector ☐ NGO
☐ Others

3. Years of experience in management accounting:

☐ <5 years ☐ 5–10 years ☐ 11–15 years ☐ 16+ years

4. Organization Size (Annual Turnover):

☐ <₹50 Cr ☐ ₹50–250 Cr ☐ ₹250–1000 Cr ☐ >₹1000 Cr



Section B: CMA Practices in Measuring Wastes (For H₁)

5. Our organization has established systems to measure waste in monetary value.
6. CMAs play an active role in identifying and analyzing operational inefficiencies.
7. Waste measurement significantly contributes to cost savings and performance improvement.
8. The insights provided by CMAs on waste reduction influence strategic decisions.

Section C: Use of Management Accounting Tools (For H₂ & H₃)

9. Budgeting and forecasting are regularly used and updated based on strategic goals.
10. Activity-Based Costing (ABC) helps improve cost allocation accuracy in our organization.
11. We use Balanced Scorecard to align performance metrics with long-term value.
12. Techniques like variance analysis and CVP analysis are essential for operational planning.
13. Advanced tools like sensitivity analysis and simulation support managerial decision-making.
14. CMAs are involved in advising capital investment and strategic resource allocation.

Section D: Strategic Role of CMAs in Competitive Advantage (For H₂ & H₃)

15. CMAs contribute beyond compliance—offering strategic insights for growth.
16. CMAs help identify opportunities for cost leadership and product differentiation.
17. Management accounting data is used to guide competitive business strategies.
18. CMAs influence top management decisions through analytics and forecasting.
19. There is a clear linkage between CMA functions and the organization's competitive position.



Section E: CMAs and National Development Goals (For H₂ & H₃)

20. CMA practices align with national initiatives like *Make in India*, *Digital India*, and *Atmanirbhar Bharat*.

21. The strategic cost management role of CMAs contributes to economic reforms and policy implementation.

22. CMAs play a role in improving governance and transparency in public and private sectors.

23. Strengthening the role of CMAs is critical for realizing *Vikshit Bharat 2047*.

Section F: General

24. How could Policy Makers make more Efficient Use of the Professional Services of CMAs in Nation Building.

25. Do you think that governmental and regulator are aware of the strategic potential of CMAs and Cost and Management Accountancy Profession? If not, what should be your recommendations for policy issues and implications.

CMAs TO BE THE POWER ENGINE OF INDIA'S GROWTH VEHICLE (Viksit Bharat in 2047)



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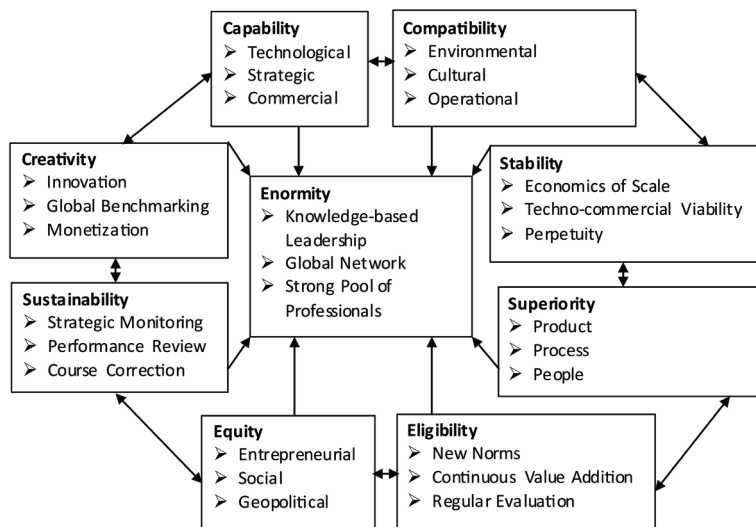
Abstract

In another 22 years India should be “Viksit Bharat” i.e. a complete nation on all the parameters of development. The oriental definition of ‘Viksit’ is more mature than the western meaning of ‘Developed’. CMAs can contribute a lot to transform today’s India into tomorrow’s Viksit Bharat because they possess certain unique strengths. This article elaborates the versatile role of CMAs as the ‘growth engines’ of the transformational vehicle. The discussion presented here is quite contemporary.

INDIA’S ELIGIBILITY TO BECOME ‘VIKSIT’ BY THE YEAR 2047

During the present days of global uncertainty, India offers a bright ray of hope to the entire world. It is the only economy which has been consistently performing reasonably well for around three decades, since globalisation commenced shaping up a closely knitted ‘world economy.’ India’s biggest strength is its large number of talented and hardworking young professionals. Among them the Cost and Management Accountants (CMAs) enjoy a special position of strategic, operational and financial leadership. CMAs have been contributing a great amount of value to the “process of India being Viksit” in a versatile manner. They are creating, utilising, optimizing and improvising this unique value by taking the cost and management accounting profession to higher global level of recognition, using better benchmarks consistently.

Before we discuss the role of CMAs in shaping up Viksit Bharat, it would be appropriate to correctly visualise what India needs to reach the status of an absolute global leadership. There are nine areas of versatile performance which will make India Viksit in 2047. These performances may be narrated as follows:



Enormous task ahead

India to attain the status of “Poorna Viksit” i.e. a completely developed nation, will have to concentrate on the following ten drivers of growth with an impactful role of the CMAs:

1. Public Infrastructure
2. Innovation in all the fields, suitable for our growth
3. Environmental Sustenance
4. Resource and Result Optimisation
5. Strategic Planning for macro and micro sectoral growth
6. Global Competitiveness
7. Social Economics i.e. subsidising and strengthening the poor
8. Enhancing the equilibrium among the five sectors of growth i.e. agriculture, service, manufacturing, nano technology and artificial intelligence
9. Strategic leadership on all the fronts of material growth
10. Urban - Rural Coordination for a balanced growth

THE MATRIX OF VIKSIT BHARAT

Many economists attempt to use their own parameters to define a “developed nation”. Some of them even design a Development Index to define the overall development of a nation. Very often they fail to consider the soft or qualitative factors which measure the share of poor people in this collective growth. The versatile development of any economy must include its performance

on the parameter of social equality. This most sensitive factor should further measure the happiness of common people. Following linear matrix should define “Viksit Bharat”. This matrix attaches equal weightage to short-term growth and long-term stability. It considers an individual’s professional calibre along with collective human growth.

		-	Professional Competence	+	
+					+
Entrepreneurial Excellence					Economic Supremacy
-					-
		-	Social Equality	+	

FIVE MAJOR TASK AREAS OF GROWTH AND DEVELOPMENT

India’s population of 143 crore people itself is a challenge to be managed. Around 60 per cent of this population i.e. 84 crore people are young and they desire to grow and prosper during the days to come. India being a special country with its varied features and aspirations, also needs a unique model of growth. It requires huge output to engage a vast population and it also needs qualitative development to become globally competitive. It should not use the American model of excessive consumerism, neither it should follow the Chinese model of “Communist Capitalism”. China is fast realising the serious lacunae in its growth model. India should fast learn from the mistakes committed by the developed nations and carve out its own model of perpetual prosperity. CMAs can contribute a lot as “growth engines” of this vehicle of prosperity which should ultimately take India to its destination of “Viksit Bharat” in the year 2047. For this long-drawn journey, the CMAs will have to use their versatile competencies to carry out the following five major tasks of growth and development:

1. *Versatile growth in and development of all the five sectors, with a social face of entrepreneurship and economic programmes:* The collective performance of the country should offer equitable, inclusive and sustainable growth to all the citizens of India. For this to happen, CMAs will have to understand perpetual economics with its different dimensions and strategies.
2. *Cost, both capex and opex is always going to be a challenge for us:-* This is because we have limited resources and unlimited aspirations. We need to design such programmes of growth which would be very



cost effective. CMAs will have to measure and monitor costs through different angles and for different purposes.

3. *Human Resource Development & Satisfaction:* India can be a global hub of manufacturing, banking, logistics and research, if the young Indians are trained amicably to meet these challenges and opportunities. CMAs can drive this important task of learning and development, as they understand the entire value chain of human development very well.
4. *Technological upgradation and application:-* Our global competitiveness depends a lot on our technological supremacy. CMAs can help the business community to garner the tech edge and attain a considerable position in the new world of technological economics.
5. *Resource Optimization:* CMAs should lead from the front in handling different types of capital viz. financial, intellectual, human, commodities, ideas, metals etc. Resource Optimization is must for India.

WHY AND HOW CMAs SHOULD CONTRIBUTE TO THE AMBITIOUS TRANSFORMATION OF INDIA, TO BECOME “VIKSIT BHARAT”?

CMAs matter a lot for the perpetual consistency of India's versatile growth. As shown in the matrix above, CMAs can design different initiatives to gain economic supremacy for India, can offer innovative business and financial models for the entrepreneurial excellence of the SMEs, should help the Government in introducing useful public welfare projects for social equality and can participate in the execution of useful professional competency development programmes. This is because they possess and practice a few special unique strengths as follows:

1. Practical application of strategic management accounting to all the five primary sectors of an economy viz. agriculture, services, manufacturing, nano technology & artificial intelligence.
2. Combined proficiency of managerial economics & strategic cost management
3. Expertise in holistic accounting needed to carry out the CBA (cost benefit analysis) of “government spending” on the private public partnership (PPP) necessary for infrastructure projects and their operational management
4. Innovation and improvisation in data-based decision making i.e. application of Artificial Intelligence (AI) required for development projects facing a lot of uncertainty
5. CMAs can infuse synergy between operational goals and financial viability



6. Goods & Service Tax (GST) can be better handled by CMAs because they know the monetisation of value addition
7. Expertise in Government accounting and inflation accounting needed to govern the public enterprises and public initiatives
8. Benchmarking of cost and revenue at various levels and in various economic sectors
9. CMAs can drive innovations in finance because they can very well combine the internal and external factors impacting the economy at macro level and business at micro level
10. Capability of carrying out sensitivity analysis of the complex development projects, to ensure the most optimum use of limited national resources.

ROLE OF CMAS IN BUILDING THE VIKSIT BHARAT OF 2047

As discussed in the previous paragraphs CMAs have been contributing individually and collectively to the making of India. Here we discuss fifteen important areas where the CMAs can contribute very significantly.

1. Affordable infrastructure in all parts of India

- Innovative, adequate and cheaper financing
- Costing and pricing of the infrastructure services, affordable for the masses
- Inviting villagers' participation in building up infrastructure, through mutually beneficial financial models
- Designing long-term infrastructure investment products to garner collective funding from the public
- Working closely with the government officers to raise cheaper and long-term funds from countries like Japan

2. Optimising the financing of SMEs

There are around six crore SMEs in India which create around twelve crore jobs. But these SMEs do not get adequate and affordable funding from the Indian banks. CMAs can significantly make a positive change here as follows:

- Designing suitable funding products which are suitable for both the parties i.e. the SMEs and the financiers
- Working closely with the small and local banks to get working capital finance for the SMEs
- Designing a risk return matrix, for both the lending bank and the borrowing SME.
- Guiding the SMEs to monetise their intangible strength, to get

mortgaged loans from the banks

3. Enhancing Public Savings

Over a period of time, India's rate of public savings has declined. It will have to be increased considerably for adequate capital formation. CMAs can serve this national priority as follows:

- Design suitable investment products for the middle-class investors, keeping in mind the rate of inflation and risk appetite
- Improving the financial literacy across the country through collaborative programmes with SEBI, NABARD, chambers of commerce, social organizations etc.
- Making mutual funds more attractive by connecting them with fiscal benefits and midsize corporates
- Designing a reward system for the SMEs which service the loans well, take care of environment & generate good employment

4. Agriculture costing, pricing and investment

Indian agriculture engages 54 per cent of our population. Almost 80 per cent of small farmers are either poor or lower middle class. Agriculture is ironically the most neglected sector in terms of its monetisation and a fair reward for the farmers. CMAs can do wonders in "agro finance":

- Treating land as an active asset of a farmer for its genuine valuation
- Guiding the farmers and relevant Government agencies about costing and pricing of agro products, so as to offer a correct ROI or net revenue to the farmer
- Guiding the farmers in getting agro-based patents and their monetisation
- Guiding the banks, insurance agencies, equipment providers, suppliers of seeds & fertilisers about fair pricing and agro reforms
- Bringing consumers, retailers and farmers together for equitable economic relationship
- Designing proper deals between the corporates and the farmers, to facilitate the small & innocent farmers to gain multiple financial returns

5. Application of Artificial Intelligence (AI)

AI is going to be very disruptive in terms of its appropriate application. CMAs can serve the larger society to gain maximum advantage from AI:

- Generic AI should assist in taking very sensitive public decisions about taxation, subsidisation, reservation, securitization etc.
- AI can be used innovatively in the service industry at remote places.



Resource allocation, logistics, automation versus manual operations etc. are very critical decisions, which can be simplified with AI.

- CMAs are most competent professionals who can use AI for complex exercises of cost benefit analysis. International and domestic tariff decisions are very difficult to handle because they carry conflicting impact factors.
- Huge cost data can be handled with AI to ascertain the cost trend. This should improve the quality of public budgeting.

6. Innovation and its financing

Indian youngsters are very creative but they lack entrepreneurial drive and funding. CMAs can guide them through the following ways:

- Monetisation of an idea and its application
- Affordable financing through profit sharing i.e. simplifying the mode of venture finance
- Assisting the corporates to build up innovation centres
- Designing a suitable model for the use of CSR Funds for driving innovation
- Assisting the local Government to use innovation for local social cause
- Designing a pricing model to offer appropriate reward to the owner of patent or copyright.
- Suggesting a suitable valuation model to activate the IPR (intellectual property right) for multiple purposes like mortgaging, royalty-based leasing, accounting etc.

7. Investment in manufacturing

During the last three decades, the manufacturing sector didn't attract adequate investment for various reasons. CMAs can play a crucial role here.

- Attracting cheaper foreign funds by assuring a stable long-term ROI
- Treating manufacturing plant as a standalone project and hence an independent profit centre, to attract the attention of bankers
- Influencing the Government to offer various benefits to the financiers of manufacturing
- Revisiting the tax holiday areas and promoting the manufacturing activity in lesser-known geographical areas
- Carrying out an appropriate CBA of manufacturing in terms of employment generation, research and development, maximum use of local infrastructure, cost and price benchmarking, environment

audit etc.

8. Macro Economics of WTO-driven tariffs and other issues

CMAs are best-placed to address the very complex issues of hidden subsidies offered by the USA to its farmers and by China to its manufacturers.

- Resolving the cases of anti-dumping duties
- Guiding the SMEs for their imports and exports, with special reference to the international tax laws, warranties, currency fluctuations, bank guarantees etc.
- Assisting the SMEs in preparing an accurate business case, so that they can avail of all fiscal and monetary benefits
- Tracking and analysing various international and domestic economic factors to guide the chambers of commerce and assist the Ministries of Industry, Trade And Commerce for accurate product pricing

9. Rationalisation of GST

This is the prime domain area of expertise of the CMAs, because they understand the value - chain of each product and service much better than other professionals. Although Indian GST has reasonably settled in terms of its operational execution, yet few strategic issues remain unresolved. These issues can be better tackled by the CMAs as follows -

- Evaluating GST in the light of its general consequence in terms of inflation, disproportionate burden on the poor people including the farmers and workers
- Trade-off between the income tax, corporate tax and GST with reference to Government's revenue, undue pressure on masses and undue advantage to the corporates
- GST and India's cost competitiveness, especially compared with China, Vietnam and other developing countries
- Reduction in the highest rate of GST, ease in GST returns, accurate proportion between value addition and rate of GST etc.
- Online settlement of GST-related issues and increase in ease of conducting business (suitable application of IT and AI)

10. Cost Audit & Management Audit

This is another domain area of the CMAs which can be considerably improvised and further activated in terms of its massive utility during the present uncertain times.

- Cost benchmarking leading to cost control and cost reduction
- Fair costing and pricing for the consumers, small suppliers and



stockists

- Cost data support for the Government to decide about GST, import - export price mechanism
- Minimum support price for the farmers and intermediaries, control on the prices of various inputs needed for agriculture
- Decisions about cost subsidies and price support to be offered to small service and logistic providers like transporters, processors etc.
- All key decisions about the pricing of services and commodities needed by the poor people e.g. energy, transport, education, food, medication, housing etc.

11. Toll and other public tariffs

Toll rate and recovery has become a very sensitive issue for every Government. It may be overcharged or under recovered. CMAs play a very vital role in the fixation of toll rates and other tariffs -

- Careful study of the capex and opex linked to the public goods like roads, bridges, ports etc. and an accurate computation of the payback period, IRR for the owner and operator
- Appropriate fixation of various toll rates for various categories of customers
- Application of AI-based apps to determine the flow of travellers and their mentality to pay a certain rate of toll
- Designing suitable financing and business model for all the public goods, based on global and local benchmarks

12. Environment Sustainability

The entire world today is suffering from multiple challenges posed to its existence. The foremost is environmental decay and fast resource depletion. CMAs using holistic accounting can measure the impact of industrial progress on natural environment.

- Holistic accounting of the serious impact of industrialisation on natural value chain and defining a score card for the corporate and municipal bodies to follow.
- Monetisation of the credits and debits linked with carbon emission, community dirt and garbage, cooperative model for managing the environment, poor countries to avoid being the garbage warehouses of the rich countries etc.
- CBA of the adoption of old technology from the developed nations and its long-term impact on the ecology of poor countries



13. Nano Technology

CMAs should develop appropriate commercial model for the application of nano technology as follows:

- Capitalisation of various nano technology projects and their life cycle cost & revenue models
- Valuation and patenting of homegrown nano technology
- Suitable financial apps for determining the royalty - based measurement of the feasibility of a nano project
- Combination of nano technology and AI, based on a correct CBA.

14. Internationalisation of Indian research

- CMAs should chalk out an operational and financial model for internationalization of Indian talent through the route of patenting and monetisation
- Many ambitious researches in the field of Indian medical science do not reach their logical conclusion as a useful intangible asset for want of financing and patenting. CMAs can convert these efforts into specific business cases and present before the global community.
- The industry-academics collaboration depends a lot on proper monetisation of the basic researches.

15. Developing suitable control systems for both, the government agencies and the private sector players

- A huge quantum of international funds remain unutilized for want of proper monitoring and evaluation system. CMAs can well design such systems also for the poor neighbouring countries
- Designing a monitoring system for the use of funds coming from the World Bank and other global institutions
- Assisting the small states and poor countries in developing business cum social cases and presenting them to the financing organizations
- Preparing the performance and feedback reports, audit reports and review reports of the funds so utilised.

THE GLORIOUS IMAGE OF “VIKSIT BHARAT” AND THE CMAS

India in the year 2047 should be a global leader on all the four parameters of “Being an Ideal Nation”. This transformation from a routine status of ‘country’ to a glorious status of ‘nation’ would be certainly challenging but also very satisfying. CMAs should perform to concretise these four basic pillars which should be strong and balanced as follows:



1. Economic Prosperity

- Resource optimization
- Equitable material growth for all
- Monitoring of progress
- Measurement of real Per Capita Income

CMAs will have to use their skills of strategic management accounting clubbed with managerial economics.

2. Intellectual Excellence

- Professional skill development
- Research & development and patenting
- Operational excellence of the New Education Policy
- Innovation in sourcing global knowledge at affordable cost

CMAs should use the latest tools and techniques of artificial intelligence, rational analysis clubbed with strategic financial management.

3. Social Equity & Equality

- Innovative measures to support the downtrodden people
- Competency development of poor youth
- Social IRR and social project finance
- Budgetary Control of the development cost and measurement of qualitative social impact

CMAs will have to use the various tools of macro-economics, IT applications for budgetary control, tools of Social Rate of Return etc.

4. Happiness as a social parameter of measuring adequacy of economic prosperity

- Social economics to redefine poverty
- CBA of various support programs and their relevance in terms of happiness and satisfaction
- Resource apportionment and the reduction in the gap between rich and poor
- Connecting happiness with employment, savings, education and social costs

The role of the CMAs in building the Viksit Bharat can be enormous if the Government offers them relevant opportunities and support. As mentioned earlier, among the professional accountants the CMAs are better placed to play a pivotal role because they are equipped with the financial and economic tools which have the utmost relevance in the broader frame of “Vikas”.

THE INDISPENSABLE ROLE OF COST AND MANAGEMENT ACCOUNTANTS IN ADVANCING INDIA'S VIKSIT BHARAT - 2047 THROUGH ENVIRONMENTAL, SOCIAL, AND GOVERNANCE PRINCIPLES



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1. VIKSIT BHARAT-2047 AND THE ASCENDING IMPORTANCE OF ESG

India has embarked on an ambitious journey to transform into a developed nation by 2047, the centennial of its independence. This vision, aptly named Viksit Bharat-2047, encompasses a holistic approach to development, prioritizing not only robust economic growth but also profound social progress, environmental sustainability and effective governance. The realization of this transformative goal necessitates a concerted effort across all sectors, with a particular emphasis on aligning economic activities with the principles of Environmental, Social, and Governance (ESG). Globally and within India, ESG factors are gaining increasing recognition as fundamental pillars for achieving sustainable and inclusive development, ensuring that progress benefits both current and future generations.

At the forefront of this national endeavour are Cost and Management Accountants (CMAs), the financial professionals equipped with specialized skills in cost optimization, resource management and strategic decision-making. Their role is rapidly evolving beyond traditional accounting functions to encompass strategic management and the creation of sustainable value for organizations. This article aims to explore the crucial role that CMAs can and must play in advancing the ESG agenda within the framework of Viksit Bharat-2047, highlighting their potential to drive India towards a future that is not only economically prosperous but also environmentally responsible and socially equitable.

The alignment of Viksit Bharat's extensive developmental objectives with

the worldwide emphasis on ESG presents a substantial chance for CMAs to apply their capabilities for the nation's advancement. This convergence indicates that incorporating ESG principles into India's growth strategy is both an ethical necessity and a vital route to realizing its developmental goals by 2047. Viksit Bharat seeks comprehensive progress across economic, social, and environmental spheres. ESG inherently addresses these dimensions within a business context. CMAs, possessing both financial and strategic acumen, are uniquely positioned to bridge the divide between these two frameworks, guaranteeing that financial choices are in harmony with the sustainability and governance objectives of Viksit Bharat. Furthermore, the increasing recognition of CMAs' changing role underscores a transformation in how finance professionals are perceived—moving from being mere custodians of records to strategic partners in business. This evolution is indispensable for the effective integration of ESG, as it demands a comprehensive grasp of business operations and their consequences that extend beyond purely financial metrics. Historically, the focus of accountants was primarily on past financial data. However, the intricacies of contemporary business, which include sustainability and stakeholder engagement, necessitate a more forward-thinking and all-encompassing strategy. CMAs, with their training in cost management and strategic decision-making, are adapting to this requirement by incorporating non-financial elements such as ESG into their analyses and recommendations, thereby becoming essential in shaping sustainable business strategies.

2. FOUNDATIONAL SIGNIFICANCE OF ESG FACTORS IN ACHIEVING VIKSIT BHARAT-2047

The integration of ESG factors is fundamental to achieving the long-term sustainability and inclusivity goals of Viksit Bharat-2047. Environmental sustainability is paramount, ensuring the prudent utilization of India's natural resources and mitigating the growing risks associated with climate change. Social progress is equally critical, fostering an equitable society that prioritizes education, accessible healthcare and the empowerment of all citizens, especially those from marginalized communities. Moreover, good governance serves as the bedrock, promoting transparency, accountability and adherence to ethical practices across both the public and private sectors. Neglecting these crucial ESG factors carries the potential to significantly undermine India's developmental aspirations. Environmental degradation can precipitate substantial economic losses due to resource depletion, natural disasters, and public health crises linked to pollution. Social inequalities can impede inclusive growth, leading to societal disharmony and hindering overall progress. Furthermore, deficiencies in governance can erode public

trust, deter both domestic and foreign investment, and ultimately stall the nation's advancement towards becoming a developed economy.

The intrinsic connection between ESG factors and the objectives of Viksit Bharat suggests that advancement in one area can positively reinforce progress in others, establishing a beneficial cycle of sustainable development. For example, investments in renewable energy sources (an environmental consideration) can stimulate the creation of green jobs (a social benefit) and simultaneously enhance India's energy security (a governance and economic advantage). This inter-connectedness underscores the importance of a holistic approach to development where ESG principles are not viewed in isolation but as integral components of a unified strategy. Furthermore, the capacity of ESG to serve as a strategy for mitigating risks for Viksit Bharat indicates that the early integration of these factors into the planning and execution phases can protect the nation's long-term developmental path. By proactively addressing environmental and social risks, India can potentially avoid costly future interventions and ensure a more resilient and sustainable future for all its citizens. Environmental risks, such as climate change and the scarcity of resources, can lead to significant economic costs. Social risks, including inequality and limited access to essential services, can foster instability and obstruct development. Robust governance structures are essential for attracting investments and ensuring the efficient allocation of resources. By embracing ESG principles, Viksit Bharat can effectively identify and lessen these risks, paving the way for more stable and predictable developmental outcomes.

3. CHAMPIONING ENVIRONMENTAL SUSTAINABILITY: DEFINING THE ROLES AND RESPONSIBILITIES OF CMAs IN INDIA'S GREEN INITIATIVES UNDER VIKSIT BHARAT-2047

Cost and Management Accountants possess a unique skillset that positions them as vital contributors to advancing environmental sustainability within India's green initiatives under the Viksit Bharat-2047 vision. Their expertise spans across various critical areas such as the following:

- **Carbon Accounting and Reporting:** CMAs are instrumental in assisting organizations to accurately measure, meticulously track and transparently report their greenhouse gas emissions. This includes not only direct emissions from owned or controlled sources (Scope 1) and indirect emissions from the generation of purchased energy (Scope 2) but also all other indirect emissions that occur in a company's value chain (Scope 3).
- **Resource Efficiency and Waste Management:** By applying their cost management principles, CMAs can implement cost-effective strategies aimed at significantly reducing energy and water consumption, diligently minimizing waste generation across operations and actively promoting



the adoption of circular economy practices that emphasize reuse and recycling.

- **Green Finance and Investment Analysis:** CMAs play a pivotal role in evaluating the financial viability of environmentally sustainable projects, conducting thorough cost-benefit analyses and facilitating access to various green financing options such as green bonds, sustainable loans and impact investments that support India's climate goals.
- **Environmental Cost Management:** A key responsibility of CMAs is to identify, accurately measure, and effectively control environmental costs associated with business operations. This includes costs related to pollution prevention, waste disposal, resource remediation, and compliance with environmental regulations, all of which are crucial for enhancing the overall sustainability of businesses.
- **Sustainability Reporting:** CMAs are essential in the preparation and assurance of comprehensive sustainability reports. These reports adhere to both national frameworks like the Business Responsibility and Sustainability Reporting (BRSR) and international standards such as the Global Reporting Initiative (GRI), providing stakeholders with a clear and transparent view of an organization's environmental performance and sustainability initiatives.

CMAs' proficiency in cost accounting and financial analysis renders them indispensable in translating ambitious environmental targets into practical financial strategies. By quantifying the financial ramifications of environmental initiatives, CMAs can construct compelling business cases that underscore the economic sense of sustainability within organizations. Environmental sustainability often necessitates initial investments in innovative technologies or revised processes. CMAs can employ their expertise in capital budgeting and investment appraisal to assess the long-term financial returns of these investments, encompassing potential cost reductions from decreased resource consumption, prospective revenues from environmentally friendly products or services, and the mitigation of environmental risks that could entail financial liabilities. This financial justification is pivotal in securing organizational commitment and propelling the implementation of green initiatives. Moreover, the evolving regulatory environment surrounding environmental disclosures in India presents a substantial opportunity for CMAs to leverage their deep understanding of reporting Standards and compliance mandates. As an increasing number of companies are required to report on their environmental impact, the demand for professionals who can accurately gather, rigorously analyze, and effectively present this critical information will inevitably rise. The Business Responsibility and Sustainability Reporting (BRSR) framework

in India mandates that companies disclose an extensive array of environmental data. CMAs, armed with their comprehensive knowledge of accounting principles and reporting requirements, are ideally positioned to navigate the intricacies of this framework. They can assist companies in establishing robust data collection systems, ensuring the accuracy and reliability of environmental data, and preparing thorough and compliant sustainability reports, thereby fulfilling a crucial role in enhancing transparency and accountability in environmental reporting practices.

4. LANDSCAPE OF ESG ADOPTION IN INDIAN BUSINESSES: ANALYSING EXISTING DATA, STATISTICS, AND REPORTS AND IDENTIFYING KEY AREAS FOR CMA EXPERTISE

Existing data, statistics, and reports indicate a growing trend in the adoption of ESG practices by Indian businesses, particularly among the top listed companies, largely driven by regulatory mandates such as the Business Responsibility and Sustainability Reporting (BRSR) framework. However, the maturity of ESG adoption varies significantly across different sectors and company sizes, with some sectors showing more advanced integration than others. Analysis of the impact of ESG practices on the financial performance of Indian companies reveals mixed findings in various studies, with some indicating a positive correlation while others report inconclusive or even negative relationships. Despite these variations, key areas emerge where the expertise of CMAs can be particularly valuable, including data collection, rigorous analysis, accurate reporting, and ensuring strict compliance with the continuously evolving regulatory landscape.

The increasing volume of ESG data generated by Indian companies presents a significant opportunity for CMAs to apply their analytical skills and provide valuable insights to stakeholders. However, the lack of standardization in reporting frameworks and the varying quality of data also pose challenges that CMAs are well-equipped to address. The mandatory BRSR reporting has led to a surge in ESG disclosures by Indian companies. This vast amount of data needs to be analysed and interpreted to understand the true impact of ESG initiatives. CMAs, with their expertise in financial data analysis, can extend their skills to ESG data, identifying trends, assessing performance and providing insights that can inform strategic decision-making. Furthermore, they can contribute to improving the quality and comparability of ESG data by helping companies adopt standardized reporting frameworks and ensuring data accuracy. The mixed findings on the impact of ESG on financial performance in Indian companies suggest a need for more nuanced analysis, where CMAs can play a crucial role. By conducting detailed studies that consider industry-specific factors and the long-term impacts of ESG initiatives,



CMAs can contribute to a better understanding of the business case for sustainability in the Indian context. While some studies suggest a positive correlation between ESG and financial performance, others show inconclusive or even negative results. This ambiguity highlights the complexity of the relationship and the need for more in-depth research. CMAs can contribute by conducting industry-specific analyses, examining the long-term impacts of different ESG initiatives, and considering mediating factors that might influence the relationship between ESG and financial performance. This can provide valuable insights for companies looking to integrate ESG in a way that creates both social and economic value.

5. ILLUMINATING SUCCESS: CASE STUDIES OF INDIAN COMPANIES WHERE CMAS HAVE SIGNIFICANTLY IMPACTED ESG IMPLEMENTATION AND REPORTING

While specific case studies explicitly detailing the role of CMAs in ESG implementation within Indian companies are still emerging in the public domain, several examples and trends highlight their growing influence. Organizations like Tata Steel have demonstrated a strong commitment to ESG goals, including achieving net-zero emissions by 2045 and improving resource efficiency. While the specific involvement of CMAs in these initiatives isn't always detailed publicly, their expertise in setting targets, tracking progress through robust accounting mechanisms and analysing the financial implications of sustainability projects would be invaluable in such endeavours. Similarly, Infosys has positioned itself as a leader in sustainability, achieving carbon neutrality in 2020. The company's focus on ESG reporting and its development of sustainability cloud solutions suggest a strong involvement of finance professionals, including CMAs, in quantifying and reporting on their environmental impact. ITC Limited has also been recognized for its sustainability efforts, including being water positive for 18 consecutive years and carbon positive for 15 years. The preparation of their detailed sustainability reports likely involves significant input from their finance teams, where CMAs would play a key role in ensuring the accuracy and comprehensiveness of the data.

These examples, though not always explicitly mentioning CMAs, underscore the increasing integration of ESG principles into the core strategies of leading Indian companies. Given the financial and accounting expertise that CMAs possess, their involvement in driving these initiatives, from setting measurable targets to ensuring transparent reporting, is highly probable and crucial for their success. The ability of CMAs to translate sustainability goals into financial metrics and to ensure accountability in ESG reporting makes them indispensable assets for companies striving for responsible and sustainable

growth in line with the Viksit Bharat vision.

6. NAVIGATING THE PATH AHEAD: POTENTIAL CHALLENGES AND EMERGING OPPORTUNITIES FOR CMAS IN INTEGRATING AND PROMOTING ESG PRINCIPLES WITHIN VIKSIT BHARAT-2047

Despite the growing momentum, CMAs face several potential challenges in fully integrating and promoting ESG principles within the Viksit Bharat-2047 framework. One significant hurdle is the current lack of universally standardized ESG metrics and comprehensive reporting frameworks specifically tailored to the Indian context. This makes it challenging for companies to consistently measure and compare their ESG performance. Furthermore, obtaining reliable and comparable ESG data, especially across diverse industries and supply chains, remains a significant obstacle. The potential conflict between the pursuit of short-term financial goals and the often long-term nature of sustainability objectives can also pose a challenge for organizations. Additionally, the evolving field of ESG requires CMAs to acquire specialized knowledge and undergo continuous training in areas such as environmental science, social impact assessment, and specific ESG reporting Standards. Resistance to fundamentally change traditional business strategies and fully integrate ESG considerations into core operations can also impede progress.

However, this evolving landscape also presents numerous emerging opportunities for CMAs. CMAs have the potential to become highly sought-after sustainability experts and trusted advisors within their organizations, guiding strategic decisions with an ESG-centric perspective. They can play a pivotal role in developing innovative tools and techniques specifically for ESG accounting, rigorous auditing and transparent reporting. Furthermore, CMAs are well-positioned to lead the crucial integration of ESG considerations into the core strategic decision-making processes of businesses. The burgeoning field of green finance and sustainable investment offers another significant avenue for CMAs to apply their financial expertise. Finally, their insights and skills can contribute to the ongoing development of national ESG Standards and effective policies that will shape India's sustainable future. Moreover, the increasing availability and sophistication of technological advancements, such as artificial intelligence (AI) and advanced data analytics, present powerful tools that CMAs can leverage to enhance the efficiency and effectiveness of ESG data management, analysis, and reporting.

The challenges inherent in ESG integration underscore the critical need for robust capacity building and continuous skill development among CMAs. Targeted educational initiatives and comprehensive professional development programs that focus specifically on ESG principles, relevant reporting



frameworks and advanced data analysis techniques will be indispensable for equipping CMAs with the necessary competencies to effectively contribute to this evolving domain. The lack of standardized metrics and the inherent complexity of ESG data necessitate that CMAs commit to ongoing learning to stay abreast of the rapidly changing landscape of ESG reporting Standards, cultivate expertise in leveraging data analytics for sustainability insights and gain a thorough understanding of the environmental and social dimensions of business operations. This dedication to continuous professional development will empower them to successfully navigate the existing challenges and seamlessly integrate ESG principles into their routine professional practices. The emerging opportunities for CMAs in the realm of ESG are directly aligned with the global movement towards more sustainable business practices and the escalating demand for skilled professionals who can effectively bridge the traditional gap between finance and the critical principles of sustainability. By proactively embracing these new opportunities, CMAs can significantly enhance their professional relevance in the modern business environment and make substantial contributions to India's overarching journey towards achieving the ambitious goals of a developed and environmentally sustainable nation by 2047. The increasing importance of ESG presents a dynamic new frontier for CMAs to apply their core skills. Their foundational expertise in financial management, thorough risk assessment and strategic thinking are highly transferable to the evolving domain of sustainability. By strategically positioning themselves as recognized experts in ESG accounting, transparent reporting and insightful advisory services, CMAs can effectively tap into a rapidly growing market demand and assume a leadership role in guiding organizations through the essential transition towards more sustainable and socially responsible business practices, ultimately playing a vital part in realizing the comprehensive vision of Viksit Bharat-2047.

A THREE PRONGED STRATEGY FOR PRODUCTION COST OPTIMISATION IN MSMEs & ROLE OF CMAs



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A “three-pronged attack” strategy involves tackling a problem or achieving a goal using three distinct, interconnected methods or approaches. In this paper we take a look at how MSMEs can blend together .

1. Industrial Internet of things (IIoT)
2. Overall equipment effectiveness (OEE) &
3. Robust costing system that quantifies financially the impact of OEE improvements

The convergence of Industry 4.0 technologies, operational efficiency and a robust costing system leads to a more granular understanding of costs, enabling better decision-making and ultimately driving greater efficiency and profitability for MSMEs. CMA has an invaluable role in linking up the above three factors and thereby help MSMEs to identify the areas for improvement, prioritize maintenance and optimize production processes and ultimately boosting productivity and profitability.

COST REDUCTION – AN INTRODUCTION

Cost reduction refers to achieving a permanent decrease in costs, contrasting with cost control, which focuses on meeting targets. Effective cost reduction emphasizes managing activities and resource consumption, rather than merely controlling variances.

Research indicates that significant cost reduction in manufacturing comes from minimizing the time and effort required for activities. This is where Overall Equipment Effectiveness (OEE) becomes vital

WHAT IS OEE?

OEE is a “best practices” metric for monitoring and improving the efficiency

of your manufacturing processes (i.e. machines, cells, assembly lines, etc.). OEE is simple, practical and powerful. It takes the most common sources of manufacturing productivity losses and places them into three categories:

- Availability
- Performance and
- Quality.

It distills complex production data into simple understandable metrics that provide a gauge for measuring true manufacturing efficiency. It also forms the foundation for tools that help to improve productivity.

Availability measures productivity losses from down time (events that stop planned production for an appreciable amount of time).

Performance measures losses from slow cycles (factors that cause the process to operate at less than the maximum possible speed).

Quality measures losses from manufactured parts that do not meet quality requirements.

Together these three factors combine into one OEE score—a single number that provides a complete measure of manufacturing efficiency and effectiveness.

OEE provides a consistent, proven way to measure the effectiveness of lean manufacturing initiatives, TPM (Total Productive Maintenance) programs and other productivity initiatives

CALCULATING OEE – THE SIMPLE WAY

OEE is the ratio of Fully Productive Time to Planned Production Time.

In practice this is calculated as:

$(\text{Good Pieces} \times \text{Ideal Cycle Time}) / \text{Planned Production Time}$

Good Pieces (pieces that are manufactured without any defects)

Ideal cycle time (the theoretical fastest possible time to manufacture one piece)

Planned production time (the total time that the production asset is scheduled for production)

Irrespective of whether the problem is a bottleneck in machine availability, suboptimal output, or materials and/or employee time wasted as a result of inadequate manufacturing quality and excessive rejects, the OEE metric enables you to effectively boost productivity and margins.

DATA CAPTURING

This brings us to the next area of concern namely how to capture OEE data accurately. A manual approach is prone to human error. Manually captured

production data suffers from inconsistency and a lack of precision. This is aggravated by the fact that multiple persons are often involved, even for the same machine or production line. This is where digital technologies like IIoT can be great enablers for MSMEs.

IIoT comprises sensor-loaded devices that collect and exchange data, enhancing connectivity among machines and systems. These sensors monitor equipment maintenance needs in real time, facilitating predictive maintenance strategies. Centralized data hubs leverage wireless and cloud technologies for communication and data analysis, with AI-driven analytics identifying potential issues.

Successful downtime reduction relies on:

1. Sensitive sensors.
2. Accurate data tracking.
3. Real-time information transmission.

Example of Setup Time Reduction

“Setups and Adjustments” represent time lost during initial setups and equipment adjustments. Inefficiencies in this area can lead to quality losses and extended lead times. Benefits of shorter setup times and smaller batch manufacturing include:

- Shorter product cycles.
- Greater flexibility.
- Improved efficiency.
- Enhanced planning and scheduling.
- Reduced variability and inventory.
- Fewer defects and obsolescence.

INDUSTRY 4.0 SOLUTIONS FOR SETUP TIME REDUCTION

Key Industry 4.0 solutions that significantly reduce setup times include:

- Augmented Reality (AR)
- IIoT
- Spatial Computing

The approach to setup time reduction involves studying, documenting, reviewing and implementing improved processes. AR can capture current processes through “expert capture,” where operators record their actions while using AR glasses, creating accurate documentation of actual procedures.

Spatial computing employs video analysis to document process steps and

their relationships in 3D space. Techniques like spaghetti charting visualize product movement through the value stream, identifying wasted movements.

IIoT systems gather contextual information during operations, including operator details, environmental conditions and time metrics, aiding analysis and documentation.

AR facilitates immersive training, enhancing speed and retention for both new and cross-trained employees. It also assists operators in following standard work procedures through visual cues.

IIoT systems further support production scheduling and feedback delivery, enhancing overall operational efficiency. Operators, technicians, maintenance and managers alike can do their jobs better with access to this relevant, real-time information.

While OEE as a metric and accurate capturing of inputs to measure it are critical it is pertinent to remember that without a context the percentages are meaningless. To understand, if 80 or 90 per cent is good or not, one has to understand the numbers (quality, performance & availability that form the percentage. It becomes even more potent if OEE is converted into a Financial KPI.

The performance numbers when turned into rupees is much more impactful for the firm and its employees.

To highlight the potential financial impact, we have considered the example of an Aluminium casting machine of 400 Tonne capacity

Assumptions

1. A 25 day, 3 shift, 8 hours per shift time has been considered
2. Cycle time of 1 minute has been considered for all parts manufactured on the machine
3. Improvements to down time through SMED and reduced maintenance time considered for the example with performance (cycle time per piece) remaining the same
4. We have assumed that due to SMED initiatives the down time has reduced by 49 hours and a further 10 hours saved due to TPM initiatives
5. Performance rate being 94 per cent has not been changed. Current standard of 1 minute per part retained under revised scenario too
6. Quality initiatives have led to a reduction of 5 per cent in rejections
7. Variable costs have been increased in proportion to improved OEE and fixed costs are considered at constant absolute amounts

CALCULATION & ANALYSIS OF OEE IMPROVEMENT ON COSTS

				EXISTING	POST IMPROVEMENTS
	Hours	Minutes	3 shifts (mins)	25 day Month	
Shift Length	8	480	1440	36000	36000
Short Breaks – 2	10 minutes each	20	60	1500	1500
Meal Break - 1		40	120	3000	3000
			1260	31500	31500
		A	Planned Hours	525	525
Down Time	(Break down & die changeover)*			100	31
		B	Operating time	425	494
		B/A	Availability	81%	94%
Ideal Run Rate	1 PPM for all parts	C	Planned output	25500	29640
		D	Total Pieces moulded	24000	27896
		D/C	Performance	94%	94%
		E	Reject Pieces	3600	2790
		F	Good Pieces	20400	25106
		F/E	Quality	85%	90%
			Overall OEE	65%	80%
Cost of operating - 400 T MC		NATURE	ORIGINAL	REVISED	
1	Wages	VC	75,000	92,303	
2	Power		1,40,000	1,72,299	
3	Consumables		15,000	18,461	
4	Depreciation	FC	90,000	90,000	
5	Staff cost		80,000	80,000	
	TOTAL COST		4,00,000	4,53,063	

Cost driver	MACHINE HOURS (Planned Production time*OEE per cent)		340	418	
	MACHINE HOUR RATE		1,176	1,083	
	CONVERSION COST PER PART		20	18	

Cost reduction due to increase in availability happens through two modes:

- Increase in availability leads to improved OEE and consequently the machine hour rates (activity) would be lesser. This would in turn translate into lower costs for the products passing through that particular machine. In our example the machine hour rate has reduced from Rs 1176 per hour to Rs 1083 per hour, an 8 per cent reduction post a 15 per cent reduction in OEE. This translates into a gain of Rs 2 (10 per cent) lower conversion cost (moulding) per part. This is significant given
 - the highly competitive nature of casting business (print to draw)
 - pricing pressure of OEMs
 - need for MSMEs to be competitive (especially vis a vis the Chinese)
- A reduction in set up time could translate into significant reduction in cost per set up or cost per hour of set up. Assuming the batch size does not change the consequent cost per unit would reduce under this scenario. The potential cost savings are significant whenever a batch level activity is targeted for improvement like in the case of set ups. However, to identify this we need an ABC model to be designed, which is currently out of scope for the current paper
- The additional spin off is increased availability meaning greater capacity and this would obviate the necessity for further investments to augment capacity. Here we find that SMED & TPM initiatives have led to an increase in the Availability by 13 per cent . This helps the MSME firm by obviating the need for additional capex augmenting capacity when volumes increase. It in military terms acts as a force multiplier
- Additionally, one can observe that the spin offs for reduction in rejections would be significant and beyond what has been captured above in terms of conversion cost reduction per part. The additional benefits that would accrue to MSMEs are :

- ▲ Reduced costs for materials
- ▲ Elimination of costs for reworking parts
- ▲ Avoidance of costly recall campaigns
- ▲ Fewer customer complaints and a better reputation

CONCLUSION

Even though most small businesses prepare financial reports for legal purposes, many of them are never used. MSME owners and managers who tend to enthusiastically adopt operational tools like OEE ,however, lack an understanding of the financial consequences and either do not understand how to use financial statements properly or are unaware of the fact that they can be used to support financial decisions. A lack of structured accounting information and data capturing systems prevents majority of MSMEs from linking their operational and financial metrics and using it to drive efficiency. MSME organizations looking to get the most out of their KPI management should focus on making their OEE goals SMART, that is:

- Specific
- Measurable
- Attainable
- Relevant
- Time-bound

Specificity is the hallmark of any effective target. Managers cannot simply say that their OEE should be “better.” The results they’re looking for must be tangible. That means there needs to be an actual number attached to any goal, whether that’s equipment availability, yield, or other factors. This also means that goals should be clear about which processes, machines and individuals are involved, affected, and responsible.

When MSMEs on top of this have the cost of OEE figured out, it makes it pretty easy to identify the financial impact of running faster, reducing downtime and reducing scrap. To calculate different results all they need to do is to plug different numbers into the formula to know how much money each part costs in total. Then, they can calculate how much more money they can potentially save by improving those things. As discussed earlier, OEE is important to manufacturing, but only if there’s context. The other key aspect that MSMEs need to note is that capturing and validation of inputs is critical and ultimately influences the efficacy of OEE measure. This is where adoption of IIoT tools would significantly help MSMEs. Ultimately what can be measured (both in numbers and value can be managed and this is



where converting OEE from a mere operational to a financial metric would greatly help MSMEs.

CMAs, given his/her unique blend of Finance, Operations and IT skills are eminently suited to contribute to this initiative. CMAs can help MSMEs leverage OEE as a powerful tool to:

- Understand the financial impact of manufacturing efficiency.
- Identify opportunities for cost reduction and process improvement.
- Support operational excellence initiatives and drive continuous improvement.
- Develop more accurate product costing and pricing models

CMA's KEY ROLES IN ACHIEVING THE VISION OF VIKSIT BHARAT 2047



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The Indian Government's "Viksit Bharat" (Developed India) initiative, set for 2047, aims to transform India into a developed nation by its 100th anniversary of independence. The initiative focuses on inclusive economic participation, sustainable development, and improved governance. The key policies and initiatives are:

- **Economic Growth:** The Government aims to boost India's GDP to \$30 trillion by 2047, emphasising sustainable economic growth with a target of 7-8 per cent annual GDP growth. Initiatives like 'Make in India' and 'Aatmanirbhar Bharat' (Self-Reliant India) promote domestic manufacturing and reduce import dependence.
- **Social Welfare:** The Government is expanding social welfare schemes, including food security programs benefiting over 80 crore Indians and the *Jan Dhan Yojana*, which provides financial inclusion to millions.
- **Infrastructure Development:** The Government is focused on developing essential infrastructure for sustainable development, particularly in areas where poverty is prevalent.
- **Ease of Living and Doing Business:** The Government is improving governance and streamlining processes to make it easier for citizens and businesses to live and operate in India.
- **Science and Technology:** The Government is investing in science and technology to improve India's global position in scientific publications and R&D. This includes initiatives like the Geospatial Policy 2022, Space Policy 2023, and Bioe3 Policy 2024.
- **Youth Empowerment:** The initiative emphasises the role of youth in shaping India's future and encourages their participation through platforms like the Voice of Youth.
- **Education:** The National Education Policy 2020 aims to create a knowledge-based society and make India a global leader in education.
- **Digital Transformation:** The Government focuses on a "Maximum



Governance—minimum Government” approach, using technology to bring the Government closer to citizens and improve service delivery.

- **Hamara Sankalp Viksit Bharat:** This nation wide campaign aims to reach unreached citizens and ensure that they benefit from various Government schemes.
- **Youth Parliament:** The Government is organising the Viksit Bharat Youth Parliament to allow young people to contribute to policy-making.
- **Student Innovation Network:** The Viksit Bharat Initiative for Student Innovation and Outreach Network (VISION) aims to support student innovation and outreach, particularly for underprivileged children.
- **Women’s Empowerment:** The Government is focusing on empowering women through initiatives like the National Nutrition Mission, women’s self-help groups, and extended maternity leave.

CMAs are vital in achieving the Government of India’s Viksit Bharat vision by 2047. They enhance financial management, ensure compliance and promote economic growth, fostering a strong business environment that aligns with national objectives.

CMA’s ROLE IN TECHNOLOGICAL ADVANCEMENT, INNOVATIONS, & START-UPS

CMAs can contribute their expertise in financial management, cost optimisation and strategic planning as follows:

- **Strategic Financial Management to the Startup Ecosystem**
 - ▲ CMAs can help start-ups and businesses develop robust financial plans, analyse costs and identify areas for improvement, helping them manage cash flows, identify funding requirements and make strategic financial decisions. By applying cost management techniques, they can help organisations reduce costs, improve efficiency, and allocate resources effectively.
- **Innovation and Entrepreneurship**
 - ▲ CMAs can assess the financial viability of innovative projects and start-ups, helping entrepreneurs make informed decisions. They can help develop business cases for innovative projects, identify potential returns on investment and risks and prepare financial reports and presentations for investors, helping them secure funding.
- **Technology Adoption**
 - ▲ CMAs can conduct cost-benefit analyses of technology adoption, helping organisations make informed decisions about investments in new technologies. They can develop financial models to assess the

impact of technology adoption on business operations and financial performance.

- **Policy and Regulatory Compliance**

- ▲ CMAs can ensure that businesses comply with financial reporting requirements, providing transparency and accountability. They can help businesses navigate tax laws and regulations, optimising tax strategies and ensuring compliance.

CMA's ROLE IN THE ECONOMIC GROWTH & PROSPERITY OF MSMEs

CMAs can significantly contribute in the following ways:

- **Strategic Decision-Making**

- ▲ They can help MSMEs develop business cases for new projects or initiatives, identifying potential returns on investment and risks. They can conduct financial analyses to support strategic decision-making, such as investments, expansions, or diversification.

- **Access to Finance**

- ▲ CMAs can ensure that MSMEs maintain accurate and transparent financial records, making accessing finance from banks and other lenders easier. They can help MSMEs explore alternative funding options like venture capital, angel investors, or crowdfunding.

- **Productivity and Efficiency**

- ▲ CMAs can help MSMEs identify areas for cost reduction and implement cost-saving measures. They can develop key performance indicators (KPIs) to measure MSME performance, identifying areas for improvement.

- **Compliance and Risk Management**

- ▲ CMAs can ensure that MSMEs comply with tax laws and regulations, optimising tax strategies and reducing tax liabilities. They can help MSMEs identify and mitigate financial risks, such as market risks, credit risks, and operational risks.

CMA's ROLE IN MODERN & RESILIENT INFRASTRUCTURE

CMAs can contribute their expertise in financial management, cost optimisation, and strategic planning in supporting the development of modern and resilient infrastructure in India.

- **Infrastructure Project Management**

- ▲ CMAs can help estimate costs and develop budgets for infrastructure



projects, ensuring that projects are completed within budget. They can develop financial models to assess the impact of infrastructure projects on the economy and identify potential funding requirements.

- **Public-Private Partnerships (PPPs)**

- ▲ CMAs can conduct financial analyses to support PPP projects, identifying potential returns on investment and risks. They can assess the value for money of PPP projects, ensuring that they deliver the best value to the Government and citizens.

- **Sustainable Infrastructure**

- ▲ CMAs can conduct life cycle costing analyses to assess the total cost of ownership of infrastructure projects, including maintenance and operational costs. They can conduct cost-benefit analyses to assess sustainable infrastructure projects' economic and social benefits.

- **Transparency and Accountability**

- ▲ CMAs can ensure that infrastructure projects are transparently reported, providing stakeholders with accurate and timely financial information. They can provide audit and assurance services to ensure financial regulations and standards are followed in infrastructure projects.

CMA's ROLE IN ENVIRONMENTAL SUSTAINABILITY

CMAs can contribute their expertise in cost management, financial analysis, and sustainability reporting in the area of environmental sustainability as follows:

- **Sustainable Cost Management & Green Finance**

- ▲ CMAs can conduct life cycle costing analyses to assess the total cost of ownership of sustainable projects, including environmental costs. They can identify and measure environmental costs, such as carbon emissions, water usage, and waste management. They can help identify and secure funding for green projects like renewable energy and sustainable infrastructure. They can assess the environmental impact of investments and help investors make informed decisions.

- **Sustainable Business Models**

- ▲ CMAs can help businesses adopt circular economy principles, reducing waste and promoting sustainable consumption. They can help businesses assess and manage environmental risks in their supply chains. They can help companies prepare sustainability reports, highlighting their environmental performance and progress.

CMA's ROLE IN AGRICULTURAL INNOVATION

CMAs can contribute their expertise in cost management, financial planning and performance measurement in supporting agricultural innovation in India.

- **Cost Management**

- ▲ CMAs can conduct cost analyses of agricultural projects, identifying areas for cost reduction and optimisation. They can help agricultural businesses develop budgets and forecasts, ensuring effective resource allocation. They can assess the financial viability of agricultural innovation projects, identifying potential returns on investment. They can help agricultural businesses explore funding options, such as Government grants, loans, and private investment.

- **Sustainability and Risk Management**

- ▲ CMAs can help agricultural businesses adopt sustainable practices, reducing environmental impact and improving long-term viability. They can identify and mitigate financial risks associated with agricultural innovation, such as crop failures, market fluctuations and regulatory changes. They can conduct benchmarking analyses to compare agricultural business performance with industry standards. They can develop KPIs to measure agricultural business performance, identifying areas for improvement.

- **Technology Adoption**

- ▲ CMAs can conduct cost-benefit analyses of agricultural technologies, such as precision farming and drones. They can develop financial models to assess the impact of technology adoption on agricultural business performance.

CMA's ROLE IN EMPOWERMENT OF YOUTH, WOMEN & MARGINALISED COMMUNITIES

By contributing their expertise in financial management, cost accounting and financial analysis, CMAs can play a vital role in empowering youth, women, and marginalised communities in India.

- **Financial Inclusion**

- ▲ CMAs can help microfinance institutions manage costs and provide financial services to marginalised communities. They can educate youth, women and marginalised communities on financial management and planning. They can conduct impact assessments of social programs and initiatives to empower marginalised communities. They can analyse social initiatives' financial sustainability and provide improvement recommendations.



- **Entrepreneurship Development**

- ▲ CMAs can help entrepreneurs from marginalised communities develop business plans and secure funding. They can develop financial management and cost accounting training programs for youth, women, and marginalised communities. They can help build the capacity of marginalised communities to manage finances and make informed decisions.

CMA's ROLE IN GLOBAL LEADERSHIP

By contributing their expertise in financial management, cost accounting and global business strategy, CMAs can play a vital role in supporting India's global leadership aspirations.

- **Cross-Border Transactions**

- ▲ CMAs can help Indian businesses navigate transfer pricing regulations, ensuring compliance and minimising tax liabilities. They can provide expertise on international taxation, helping Indian businesses manage tax implications of global operations. They can ensure that Indian businesses comply with international financial reporting standards, enhancing transparency and credibility.

- **Thought Leadership**

- ▲ CMAs can conduct research on global best practices in cost management and financial reporting, contributing to thought leadership in the profession. They can conduct market analyses to identify opportunities for Indian businesses in the global market. They can help Indian businesses develop financial plans and strategies for global expansion. They can identify and mitigate financial risks associated with global supply chains, ensuring business continuity.

TRANSFORMING VISION INTO REALITY: THE STRATEGIC ROLE OF CMAs



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INTRODUCTION

India is approaching the centenary of its independence in 2047 and it has articulated a bold and comprehensive Vision known as Viksit Bharat (Developed India). This vision aims at transforming India into a fully developed nation with impactful presence on the globe. This Vision is not day dreaming but is a meticulously planned higher order strategic objective. The Vision is well grounded in multiple pillars of development, including accelerated economic growth, rapid technological advancement, environmental sustainability, inclusive governance, and social equity.

This Vision of Viksit Bharat 2047 can only be realized through a multifaceted development approach and professional business leaders stand at the heart of this transformation. Cost and Management Accountants (CMAs) due to their inherent decision support skills, are likely to play a pivotal role in strengthening the required leadership in Indian business and socio-economic front. In this article the author has made an attempt to discuss how CMA's capabilities can play a very significant role in eight key dimensions vital to the attainment of India's Viksit Bharat Vision. To match pace of business with technological advancements, CMAs have the competence to lead digital transformation by enabling AI-driven big data analysis and agile decision-making. Their expertise in financial stewardship, cost efficiency, and strategic planning make them a key player in fostering innovation and supporting startups. Cost optimization, resource utilization and efficiency improvement are the core capabilities of CMAs which are crucial for MSME success in the modern competitive era. CMAs also play a crucial role in building modern and resilient infrastructure by ensuring cost-effective project execution and robust financial controls in mega infra projects. On the environmental front, they are frontrunners in sustainability and ESG accounting, auditing and reporting. In agricultural innovation, CMAs support technology adoption and efficient financing models, helping transform rural economies. Their engagement with youth, women, and marginalized communities through



financial literacy and entrepreneurship mentoring contributes directly to inclusive growth. Last but not the least, CMAs are well aligned with global professional counterparts and facilitate India's global leadership. This article makes an attempt to deep dive into each of these dimensions.

DRIVING TECHNOLOGICAL MODERNIZATION

India is now ranked third among the G20 nations in terms of overall digitalization, reflecting the country's rapid progress in adopting digital technologies across sectors. The Indian digital transformation market reached USD 31.2 billion in 2023 and is projected to grow at a CAGR of 25.1 per cent from 2024 to 2030. CMAs are going to be the key facilitators in India's journey towards a digitally empowered economy. Digital adoption comes to business houses with lots of complexities which can be demystified by CMAs with their unique combination of deep financial and operational expertise coupled with exposure to various industries. CMAs play a crucial role in helping organizations implement modern financial systems, automate routine processes and integrate digital tools that enhance transparency, efficiency, and accountability.

While investment in digital infrastructure is the need of the time for a large number of enterprises, CMAs help them understand whether the investment is worthwhile or not by applying their strategically aligned financial acumen. They are experts in guiding development data-driven performance monitoring and management frameworks and thus their presence helps in improving the operational agility and facilitates correct decision-making at all levels of the organization.

FOSTERING INNOVATION AND SUPPORTING STARTUPS

India's startup ecosystem has attracted over \$150 billion in investments between 2014 and mid-2024, with sectors like fin-tech, e-commerce, and enterprise tech leading the charge. There are now over 112,000 DPIIT-recognized startups and the ecosystem is growing at an annual rate of more than 13 per cent. India's fast-growing startup ecosystem needs professionals on ground who can handhold budding new edge entrepreneurs. CMAs fit in this role as they are configured to act as strategic partners of the business house think tank.

Startups usually face financial and other operations constraints amidst highly uncertain and competitive environments, with limited capital and evolving business models. CMAs help the founders by bringing clarity through developing realistic financial plans powered with sensitivity analysis and scenario planning. They help founders implement robust and agile budgeting

systems and manage cash flows effectively. Their expertise in break-even analysis, what if planning and relevant costing and becomes crucial in smoothing the financial runway during the early stages of growth.

Capital structure decisions trouble the entrepreneurs and CMAs are the torch bearers guiding as to whether to raise equity, debt, or explore hybrid instruments—while keeping long-term tax efficiency and dilution risks in mind. Their involvement ensures that startups are not only innovative but also financially disciplined. CMAs help develop cost management mechanism and performance metrics to suit every stage of start-up life cycle distinctly.

CMAs are serving as mentors and advisors on various touch points in startup-ecosystem such as incubators, accelerators, and Government-backed platforms like Atal Innovation Mission and Start-up India Seed Fund Scheme. CMAs enhance investor confidence as they improvise governance through better internal controls, risk management, regulatory and tax compliance. In essence, CMAs act as a bridge between entrepreneurial vision and financial viability. Their role is vital in transforming promising ideas into scalable, investor-ready enterprises that can contribute meaningfully to India's innovation-led economic growth.

ENHANCING ECONOMIC GROWTH AND EMPOWERING MSMEs

The MSME sector contributed 30.1 per cent to India's GDP and accounts for over 45.79 per cent of India's exports as of 2024.. Exports from MSMEs have grown from ₹3.95 lakh crore in 2020–21 to ₹12.39 lakh crore in 2024–25, reflecting their rising global competitiveness.

The backbone of India's economy is its MSME sector as it contributes significantly to inclusive development, employment generation, exports. However, MSMEs face lots of challenges with respect to profit margin due to fluctuations in cost elements, and limited pricing power. CMAs are uniquely positioned to MSMEs through structure, discipline, and strategic foresight to their operations.

CMAs help MSMEs implement cost records and audit systems, activity-based costing, standard costing and budgetary control mechanism which are essential in achieving the much desired operational excellence including waste reduction and resource optimization. Their interventions directly impact profitability and sustainability

Access to finance remains a persistent challenge for MSMEs which can be addressed with the robust feasibility analysis skills of CMAs who play a critical role in preparing bankable project reports, improving credit worthiness and facilitating access to institutional funding. They also guide enterprises in understanding and leveraging Government schemes, subsidies, and credit



guarantee programs.

Digital transformation is the need of MSMEs also but their financial constraints do not allow them to invest lavishly on technology front. CMAs are also helping MSMEs to adopt affordable digital tools for accounting, inventory, payroll, e-invoicing, GST filing, digital payments and compliances. Moreover, CMAs help MSMEs navigate complex regulatory frameworks, including GST, labour laws and environmental norms. Their guidance ensures audit readiness, reduces compliance risks, and strengthens governance. CMAs also support export readiness by aligning costing structures with global pricing expectations and helping MSMEs to meet international quality and documentation standards.

BUILDING MODERN AND RESILIENT INFRASTRUCTURE

India's Vision for Viksit Bharat 2047 places massive emphasis on building world-class infrastructure across transportation, energy, digital connectivity and urban development. The Government's record capital expenditure outlay of ₹11.1 lakh crore in the Union Budget 2024–25 which constitute 3.4 per cent of India's GDP, is a clear signal of this commitment. However, the success of these investments depends not just on engineering execution but also on financial discipline, cost efficiency, and long-term sustainability—areas where CMAs play a vital role.

CMAs are experts in areas such as feasibility analysis, budgetary control, project management and their involvement ensures that large-scale projects are not derailed by cost overruns or financial mismanagement. Lifecycle cost analysis and capital budgeting techniques are very effectively used by CMAs in the appraisal of crucial infra projects so as to ensure long-term returns and sustainability of selected ones.

In public-private partnership (PPP) models and urban infrastructure, transparency, risk sharing and financial structuring is vital and expertise of CMAs in contract costing, procurement strategy, and contractor performance monitoring ensures that these requirements are complied with.

CHAMPIONING ENVIRONMENTAL SUSTAINABILITY

Sustainable growth can be seen as a lifeblood of national policy planning because of India's commitment to reduce the emission intensity of its GDP by 45 per cent by 2030 and achieve net-zero emissions by 2070. Thus India Inc. is expected to integrate environmental responsibility as an integral part of business model and not just as a compliance requirement. CMAs play a pivotal role in embedding sustainability into financial systems and decision-making frameworks so as to bring green transition. Environmental



Management Accounting (EMA) propagated by CMAs enables organizations to identify, quantify, and manage environmental costs.

CMAs are key professionals in the area of various forms of sustainability reporting such as Business Responsibility and Sustainability Reporting (BRSR) Environmental Social and Governance (ESG) scoring, carbon accounting and green budgeting, helping organizations align with evolving regulatory frameworks. CMAs' competence to translate environmental metrics into strategic financial insights makes them indispensable. Understanding this, the Institute of Cost Accountants of India (ICMAI) has proactively established the Sustainability Standards Board (SSB) in 2022 to develop guiding principles for CMAs to integrate sustainability into corporate reporting and business strategy.

TRANSFORMING AGRICULTURE AND RURAL ECONOMIES

Nearly 43 per cent of the employment in India comes from the agriculture sector and it contributes over 46 per cent to the national income. Despite this magnitude, the sector is facing many crucial challenges. Poor productivity, fragmented landholdings, slow pace of innovation and limited access to modern financial tools are most troubling ones. CMAs are competent to play a transformational role in addressing these issues by bridging the gap through applying their financial discipline, cost efficiency, and strategic planning to the grassroots level.

Activity-based costing, farm budgeting, and input-output analysis are some examples of techniques deployed by CMAs to facilitate agri-businesses, cooperatives, and Farmer Producer Organizations (FPOs) for improving their efficiency and effectiveness. Their project management capabilities as discussed earlier in this article can be effectively used in agri-infra projects like cold chains, warehouses and solar irrigation systems. In addition, CMAs are contributing to the digitization of rural economies by helping FPOs and cooperatives adopt digital accounting tools, mobile-based inventory systems and e-market platforms. CMAs facilitate farmers' access to credit and Government schemes by ensuring compliance with scheme norms. Their involvement improves the bankability of rural projects and enhances creditworthiness.

EMPOWERING YOUTH, WOMEN, AND MARGINALIZED COMMUNITIES

India's growth story needs inclusion of its youth, women, and underserved communities to build up genuine demographic dividend. However, financial illiteracy, credit constraints and lack of entrepreneurial boost hinder their



full participation in the economy. CMAs are playing a transformative role in bridging these gaps. By organizing financial literacy and inclusion programs they can explain the essential financial principles such as budgeting, savings, credit management, and investment planning.

CMAs are guiding self-help groups (SHGs), micro-enterprises, and women-led startups. They offer expertise on cost control, pricing, and financial planning. CMAs also assist in preparing business plans and financial documents that help women access institutional finance and government schemes.

For youth empowerment, CMAs contribute through mentoring programs, start-up incubation support and skill-building initiatives beyond individual support, CMAs engage with Government bodies, NGOs, and cooperatives to advocate inclusive economic policies.

ENHANCING INDIA'S GLOBAL COMPETITIVENESS

With exports crossing \$770 billion in FY 2023–24 and India ranking 40th in the Global Innovation Index, the focus is now on aligning domestic enterprises with global standards. CMAs are playing pivotal role in improving corporate governance and credibility by transitioning businesses from local accounting systems to globally accepted standards. The Institute of Cost Accountants of India (ICMAI) offers specialized certifications in IFRS and international trade compliance, positioning CMAs to lead Indian enterprises into global financial ecosystems.

CMAs not only guide export-oriented units (EOUs) in pricing strategies, foreign exchange risk management, but also help them in complying with trade documentation and customs regulations. Their expertise of costing models make the business offerings competitive in international markets while maintaining profitability.

CMAs also facilitate cross-border business expansion by conducting due diligence, evaluating financial viability and formulating organic or inorganic growth strategies. CMAs support merger and acquisition (M&A) deals by ensuring compliance with host country regulations, hedging currency risks and structuring operations for tax efficiency.

OPI's JOURNEY: BUILDING HEALTH, TRUST, AND COMMUNITY



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As the CEO of Otsuka Pharmaceutical India (OPI), I am honoured to share our story—a story of dedication to health, innovation, and community. At OPI, we believe in making a positive impact not just in India but across the world. Our journey is guided by a commitment to quality, care, and inclusivity.

1. EMBRACING INNOVATION AND TECHNOLOGY

Over the past decade, we've nurtured one of India's most advanced facilities for producing wide range of sterile injectable products. This ensures that every product we make meets the highest standards of safety and effectiveness.

Innovation at OPI goes beyond machines and processes. We've introduced a concept of "Emotional Pharmacopoeia," which encourages every team member to ask, "Would I give this product to someone I love?" This approach fosters a deep sense of responsibility and care in our work.

Our SHINKA program further instils a mind-set of quality and continuous improvement among employees. By integrating technology into our daily operations, we ensure that our products and services consistently meet the needs of patients and healthcare professionals.

2. SUPPORTING ECONOMIC GROWTH AND SMALL BUSINESSES

India's economy thrives on the contributions of small and medium-sized enterprises (SMEs). At OPI, we collaborate with numerous local vendors and partners, strengthening the backbone of our economy. Our commitment to "Make in India" has not only enhanced our capabilities but also created employment opportunities and skill development for many.

Our manufacturing facility in Gujarat has become a hub of economic activity, providing jobs and fostering growth in the region. By working closely with local suppliers, we've helped them improve their standards, contributing to



a more robust and competitive market.

An important milestone in this mission is Otsuka: JIM Inauguration at OPMF, part of the Japan-India Institute for Manufacturing (JIM) initiative. Launched on 23rd January 2020, this collaboration between the Governments of Japan and India promotes the “Manufacturing Skill Transfer Promotion Programme,” creating a pool of skilled manpower. The inauguration was graced by H.E. Mr. Satoshi Suzuki, Ambassador of Japan to India, alongside dignitaries from regulatory bodies and Otsuka leadership. Through JIM, OPI supports PM Modi’s ‘Skill India’ vision, imparting critical knowledge and vocational training to the youth—strengthening both industry and individual progress.

3. BUILDING RESILIENT INFRASTRUCTURE & CONTRIBUTE TO GLOBAL HEALTHCARE

A significant milestone in our journey has been the development of state-of-the-art infrastructure. Our manufacturing plant is designed to meet both domestic and international standards, ensuring that we can serve patients effectively.

Beyond physical structures, our infrastructure includes robust processes, distribution network, regulatory frameworks and digital systems that support every function—from formulation development to quality assurance. This comprehensive approach allows us to navigate challenges, such as global supply chain disruptions, with resilience and efficiency. The company is commanding high market share in India where every 5th patient is administered our products in hospitals; and, over 70 countries across the world also uses our products manufactured in India.

4. COMMITMENT TO ENVIRONMENTAL SUSTAINABILITY

Caring for the environment is integral to our mission. OPI is dedicated to achieving carbon neutrality and water neutrality. In 2022, we initiated tree plantation and nurturing drive and energy-saving initiatives.

These efforts are part of a larger strategy: the OPI – Green Initiative, which focuses on four key areas—Green Power, Green Air, Green Water, and Green Campus.

Green Power: We’ve pioneered clean energy solutions, including a 2.025 MW solar plant, a 2.25 MW wind energy purchase agreement (2023), and a 3.2 MW hybrid setup (2024). Our goal of reducing carbon emissions by 50 per cent by 2028 is already on track for early achievement.

Green Water: From implementing Zero Liquid Discharge (ZLD) and recharging rainwater through borewells, to introducing a new WWRO plant, we’ve significantly reduced borewell water draw by 100–150 KL/day.



Green Air: By switching to 100 per cent biofuel for boilers, installing ESPs (Electrostatic Precipitators), and maintaining rigorous AQI monitoring, we ensure cleaner air.

Green Campus: With 15 per cent of our campus dedicated to green cover, we promote biodiversity and sustainability.

These comprehensive initiatives exemplify our proactive approach to environmental responsibility and long-term ecological well-being.

5. EMPOWERING YOUTH, WOMEN, AND MARGINALIZED COMMUNITIES

Empowerment begins with opportunity. At OPI, we strive to provide equal access and fair chances for all, regardless of gender, age, or background. Our hiring and training programs are designed to support women, fresh graduates, and individuals from underrepresented communities. Our three shifts running factory has a large worker strength of over 800 workers coming on daily basis, ~50 per cent which are female workers.

We offer specialized training modules and on-the-job mentoring to ensure that employees are not only employed but also empowered to grow within the organization. Every year, we organize online Yoga sessions, Health check-up camps, and learning modules for all employees. Safety programs like ANZENDAIICHI [Safety First] foster a sense of security and belonging.

OPI CEO, is widely respected as a “Chief Empowerment Officer.” He emphasizes empowerment through trust, support, and shared values, fostering emotional connections and a strong sense of community fostering integrity over profitability.

6. CELEBRATING DIVERSITY AND INCLUSION

Inclusivity is a base of our culture. Our CEO, **Mr. Swadia**, believes in celebrating major festivals with employees and workers, making everyone feel valued and included. By embracing diverse traditions and cultures, we create a workplace where every individual feels respected and appreciated.

These celebrations are more than just events; they are expressions of our commitment to unity and diversity. They strengthen bonds among employees and reinforce our shared purpose.

7. RECOGNIZED FOR EXCELLENCE

OPI’s leadership has been consistently acknowledged across prestigious platforms, reinforcing the company’s growing impact on the global pharmaceutical industry.

The company's CEO has been recognized as one of the Top 10 Leaders in Pharma & Life Sciences in Asia – 2025 by CEO Insights Magazine. This honour elevates the company's credibility and influence in the life sciences sector.

We are proud to have received the SHRM (Society for Human Resource Management) award, recognizing our outstanding HR practices and commitment to employee well-being. This prestigious award highlights our efforts in creating a supportive and inclusive work environment.

8. A SPIRITUAL APPROACH TO LEADERSHIP

The CEO of OPI integrates spiritual principles into his leadership. He is inspired by the Sanskrit quote वसुधैव कुटुम्बकम्, meaning "The world is one family." This philosophy guides our approach to business, emphasizing compassion, unity, and global responsibility.

Being CMA by profession and very fond of chanting Sanskrit shlokas, he often starts meetings with prayers and lamp lighting urging all in his versatile way stating "relax, relax, relax".

9. LOOKING AHEAD: A VISION FOR THE FUTURE

Our journey is far from over. With strong leadership, a clear vision, and deep-rooted values, we continue to dream big and work hard. We aim to expand our therapeutic offerings by putting efforts to bring Otsuka's novel therapeutic products in India in the next 5 to 10 years.

Our medium- and long-term plans are created under our group philosophy: "Otsuka -people creating new products for better health worldwide."

India is on the rise and so is OPI. As we enter a new decade of growth and contribution, we promise to stay true to our mission, continue empowering our people, and work relentlessly towards well-being of all.



VALUE GENERATION POWERED BY DIGITAL TRANSFORMATION FOR DEVELOPED INDIA 2047: CMAs' PLAYBOOK



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ONSET OF THE INDIAN DIGITAL REVOLUTION

One critical imperative for all finance professionals, including Cost and Management Accountants (CMAs), is to reassure and reinvigorate themselves further with professional competencies when India is globally recognized as one of the most happening countries. It is advancing towards inclusive economic and pervasive societal prosperity. Encouraging developments are progressively becoming evident to benefit 1.4 billion-plus citizens, with a median age of about 29 years. The clarion call for the nation is to elevate the country to *Viksit Bharat*, i.e., an economically full-blown 'Developed India 2047' with the third highest GDP and technology-driven measures to ensure sustainable and inclusive prosperity.

After successfully revolutionising transactional payment banking for ordinary people with globally acclaimed UPI, India is now engaged in establishing a nationwide Digital Public Infrastructure (DPI) intended to serve as a resilient and powerful catalyst for innovation so that ordinary people can benefit from the accelerated value-generating propositions (*Nilekani, 2024*)¹. Although, like developed countries, the immediate focus seems to be on artificial intelligence as the pivotal technology in the stack, blockchain is also slowly being adopted to craft transactional platforms. However, the not-so-encouraging factor is that MSMEs are generally slow to embark on the digitalization journey, just as they were late in joining the ERP bandwagon during the early part of this century.

The authors' studies reveal that one of the differentiating features is that more and more Indian corporates across industry sectors are working towards achieving a state of readiness to fire all cylinders to derive the benefits of digital technologies with an unescapable approach. The DT of operations with newly crafted revenue and business models is considered an inevitable necessity to contribute sustainably to the clarion call for 'Developed India 2047'.

The overwhelming impact of the ever-evolving digital technologies (DigiTechs) in the Industry 4.0 era is rewriting the game plan to fight out competition by serving stakeholders in multifarious impactful ways. The systems and processes for administering Governmental services are also being revolutionised more efficiently and inclusively. The case in point is the digitalisation of India's direct and indirect tax administration. In such a dynamic environment, if business entities continue to rely only on legacy business and revenue models, operating strategies, and computing technology systems, they will expose themselves to challenges in navigating business propriety, and MSMEs are no exception.

OBJECTIVE

In the light of the above, the Indian CMAs must respond to the clarion call of the motherland with conviction and resolve to contribute to the national Mission to transform India into a fully developed country by 2047. This is not a repressively imposed responsibility but, by all means, a professional responsibility that must be taken over and driven by one's own volition and resonate in the mind at all times. While earning their livelihood, CMAs must contribute by joining the movement and adopting a structured approach with a pre-defined operating framework and playbook.

The community of CMAs can adopt many ways to contribute to these revolutionary economic activities. The aggregated impact of their contributions will help to achieve the Mission with resilience and in all aspects of sustainable and equitable economic growth and prosperity. Technological advancements and their applications, particularly digital technologies, have been identified by the Government of India as one of the substantive contributors to this Mission. The author has chosen the digital transformation (DT) of industries across the sectors and governmental activities as the theme for this paper.

In the given limited space, the author has made efforts to create a framework for this and narrate the components of the Playbook, which will help CMAs to contribute towards achieving the said Mission. Thus, the profound objective of this paper is to facilitate the process of CMAs contributing to the *Maha Karma Yagna* for *Vikshit Bharat* through the DT.

Readers are requested to bear with the often-used words 'have to', 'must', and 'should' in the *CMAs' Playbook* section, since the fundamental purpose of this paper is to design a result-efficient framework and an effective role for CMAs in the digital transformation process. All acronyms in the paper have been expanded on their first use and are to be read subsequently in the same way.



THE EVOLVING ROLE OF CMAs

In the dynamic environment of a happening country like India, all finance professional, particularly CMAs, have a specific role to play. They have to assume responsibility for leading the tasks of maximising value creation (MVC) and minimising value destruction (MVD) with effective risk, legal, and regulatory compliance management measures as the key brand image differentiator. In his research paper, Klaus (2020)² concluded that, *“Digitalisation has the potential to disrupt the management accounting domain. It may not only affect the digital landscape of the organisation and the associated business models, but also management accounting and control practices as the role of the controller.”*

NASCOM (2024)¹ suggested that in the present era, corporations and technology players must capitalize *“on the future demand of digital and building the necessary infrastructure layer, setting up accelerator programs to foster innovation in digital to solve citizen problems,”* The directional guidance of the Niti Aayog (2024)³ for Viksit Bharat or developed India 2047 is for taking a composite approach for diversity, equity, and inclusivity (DEI) with the application of a ‘Phygital’ architecture combining physical and digital technology applications. Therefore, one significant directional guidance for CMAs is to adopt a pervasive stakeholder-centric DigiTech approach coupled with physical operations. However, they must ensure the least possible adverse impact on people’s employment, yet not miss any emerging opportunity for shared value creation for all stakeholders across the societal levels of India.

The ultimate objective of any business strategy is to delight every direct and indirect stakeholder with shared benefits, simultaneously with sustainable growth and prosperity. This will call for continuous value creation with agility, professional oversight, ethics founded on humane values and pervasive risk and compliance management. They must also contribute to the Government’s mission to revolutionise the adoption and applications of DigiTech to propel the country to ‘Developed India 2047. Cost-efficient and timely deliveries of the right products and services to the target customers and beneficiaries at the right time and price are essential. Who can best fulfil these objectives other than CMAs?

Their professional expertise and competencies are built and continuously enhanced through The Institute of Cost Accountants of India’s (ICMAI) dynamic, application-driven academic programs and co-curricular and continuous education initiatives. All these make them well-prepared to excel in these responsibilities. Readers may refer to the subsequent sections, which establish the correlation between management accounting and digital competencies.



CMAs are ideally suited to lead as lead architects of business and digital transformation strategies, ensuring alignment with the organization's vision, mission, and cultural values and critical focus on risks and compliance management. They must also be actively instrumental in executing organizational strategies with innovatively crafted tactics. They should adopt a 360 degree approach for India's vibrant diversity, from agriculture, manufacturing to services, and large legacy organisations to MSMEs and startups.

RESEARCH METHODOLOGY

This paper is based on the groundwork of extensive studies of credible research-based literature done by the author while writing his first and second enlarged editions of his Book4 on digital transformation. He has met and interacted with numerous digital technologists, CTOs and CDOs, startupians, corporate professionals, researchers, authors, and academicians of India and abroad. He has also rendered corporate and academic consulting services and delivered complete credit courses and MDP programs on DigiTech and applications. The application-oriented knowledge, learning points, and professional aptitude and attitude gathered during these courses have collectively constructed the foundation of this paper.

The author has also conducted empirical research and written several papers and Book Chapters on DigiTechs and their applications. The research-driven findings and conclusions acquired from the perspectives of digital solution builders, ordinary users, corporate practitioners, etc., have helped the author write this paper. References to additional published literature studied to evidentially support various aspects of this paper have also been cited.

MANAGEMENT ACCOUNTING COMPETENCY AND DIGITAL COMPETENCY

Research studies, albeit a few, have established the correlation between cost and management accounting competency (CMAC) and digital competency (DC). One such study was conducted by *Imzai, Mahadi, and Aujirapongpan (2023)*⁵, which considered a sample of 151 respondents to their research questionnaire. They concluded that, *"Digital competency had a pronounced direct effect on management accounting competency ..., directly influenced competitive performance, "* and *".... influenced competitive performance through the mediation of management accounting competency"*

The above conclusions are exciting and aptly relevant to one of this paper's key propositions: CMAs are the best-equipped finance professionals to hold the functional leadership roles and responsibilities for any organisation's DT journey, including Governmental organisations. A graphic illustrates this aspect in a subsequent section with more details. However, several more empirical

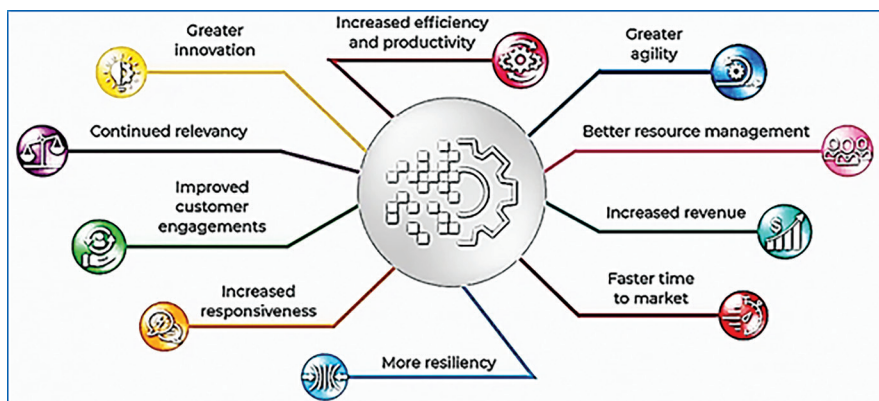
studies are needed in the Indian business and digital technology ecosystem.

INNOVATION TO BUSINESS MODEL TRANSFORMATION – THE DIGITAL JOURNEY

Any digital transformation project aims to help innovate new and unique business ways with a front-to-back, i.e., market-to-operations approach. The ideating and execution process is powered and driven by the organisational vision, mission, digital technology policy, DT strategy, and SOPs for risk-enabled performance management and governance (REPMG). According to KPMG6 “DT is a new business transformation paradigm that leverages cutting-edge technologies to design and implement a customer-centric operating model.” Another prime objective is to create risks, cybersecurity, and data privacy management as the key differentiators for brand image building.

Significant Benefits of Digital Transformation

GRAPHIC – 1*



*Source: <https://deltalogix.blog/en/2022/06/14/benefits-of-digital-transformation-how-a-company-changes-with-digital/>

The above graphic delineates ten benefits, mostly measurable in financial terms, that an organisation can derive by successfully implementing DT. For further reading, readers may refer to the weblink provided underneath the graphic. Due to space limitations, those are not being further narrated.

Contrary to popular belief, digitalising business operations and having a computing system that takes over routine, mundane activities using robotic process automation (RPA) do not equal DT. The next step of DT is DigiTech and digital strategy-driven business model innovation (BMI) and revenue model innovation (RMI), the foundation for which is laid by digitalising

systems and processes. The objective should be to generate additional profit, enhanced ROI, and brand image. One must remember that DT is not a destination but a journey in terms of excellence with sustainable prosperity. The strategies followed by certain startups are first to innovate new products/ services and/or new business models, or conduct the business differently with DT than what the existing operators are doing to attain competitive advantages. Readers may refer to Section I, spread over nine Chapters 1.1 to 1.9 of the author's Book4, which contains detailed discussions on the multivarious dimensions of DT. In paragraph 1.5.2, the author has briefly explained six steps for laying the foundation of DT and ten questions, the correct answers to which will help move ahead with DT and REPMG in search of excellence with sustainable prosperity. Chapter 1.9 contains discussions on Digital Leadership and Digital Cerebralism.

CMAs' DIGITAL TRANSFORMATION PLAYBOOK (DTP)

Politicians and business professionals have adopted the principle of 'Playbook' from the sports field. It contains the strategic game plan and execution tactics to outwit and defeat the opponents. It also defines the roles and responsibilities of the team's captain. The Oxford Dictionary defines a playbook as "*a book containing a sports team's strategies and plays, especially in American football.*" The genesis of the word strategy is stratagem. It originated from army operations to fight and defeat the enemy with minimum risks and collateral damage to civilians. Lyndon B Johnson, a former president of the USA, said, "*Doing what is right is not hard - Knowing what right is.*" A Playbook, therefore, helps professional managers know the process of:

- Identifying the right thing to do and how to do it to achieve short-term objectives and long-term goals aligned with the entity's vision and mission,
- Framing the strategies for what is to be done to outsmart competition, proactively mitigate risks, and
- Crafting the game plan and tactics for how it is to be done
- To move ahead with competitive advantages for sustainable prosperity.

The Playbook also documents, communicates, and guides:

- Business policies, strategic game plans, and tactics for purposeful execution,
- Technologies to be adopted and applied at the optimised capital and revenue expenditure,
- The best practices and processes for predefined tasks, and

- Predefined business objectives and long-term goals to be attained.

It will be pertinent here to understand the precise definition of ‘Digital Playbook’. According to *Deloitte (2024)*⁷, “*The Digital Playbook aims to be a compass for companies, helping them understand the cross-sectoral nature of the regulatory landscape, mitigate compliance risks, and adopt not only new technologies but also diversified business strategies.*” Thus, the *CMAs’ Playbook* aims to identify and decide the right things to do with the right applications of digital and other technologies in the right way to realise both long-term and short-term goals with desired governance and minimum possible risks of failure.

The key phrase in the context of this paper and for CMAs is ‘diversified business strategies’ because one primary end objective of DT is creating new business models accompanied by new revenue models for realising sustainable net earnings with the desired rate of ROI. This end objective also calls for total cost optimisation of the operations. Government agencies aim to reach the marginal ordinary people at the bottom of the societal pyramid to deliver services and ensure livelihood at an optimised cost with speed and quality. Cost and Management Accountants are the best-equipped finance and strategic management professionals to take up the role and lead DT from a holistic business management perspective.

The author has attempted to briefly narrate the main features of the CMAs’ DT Playbook in the following sub-segments:

Digital Transformation Framework and Journey

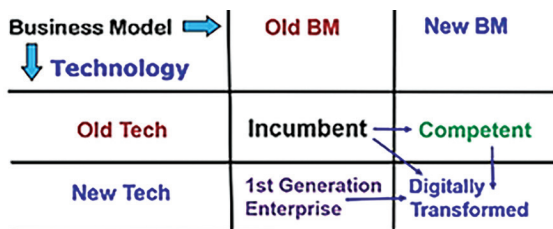
From finance professionals like CMAs, the DT framework should primarily help achieve the purposeful objectives of a successful, digitally transformed organisation with sustainable prosperity and DEI. The word ‘purpose’ here must describe why digital transformation is a must, and ‘objective’ must describe the ultimate results to be achieved in the short and long run. Both these have been briefly dealt with in the above sections.

At this stage, let the same be put in a framework through a ‘Johary Window’. At the outset, it is assumed that the entity is looking forward to the DT of its business. It has already completed digitalizing its operating systems and processes by adopting and applying an appropriate combination of DigiTechs, including AI tools and cybersecurity measures. All these are assumed to be:

- Adequately designed with flexibility for embedding new business and revenue models and the ability to scale up with business growth, and
- AI systems will always use relevant and updated data to track performance and draw insights from data analytics to make strategic decisions.

Business Model and Revenue Model Creation Framework

GRAPHIC – 2*



*Source: Created by the author

The framework, captured in the above Graphic 2, provides a naive way to understand how different combinations of legacy ICT and ERP systems and digital technologies with old or new business models can help create distinct opportunities in the emerging technology-driven dynamic business environment. ICT indicates the existing information and communication technology with or without enterprise resource planning (ERP) applications and Web3 with or without public cloud computing. Such flexibilities will also help bring MSMEs into this framework and journey.

The abbreviation ‘BM’ means business model, and ‘Tech’ indicates computing and digital technologies. The understanding from this framework in terms of challenges and focus can be summarised for building the core foundation of this paper:

- **Incumbent (Old Technology and Old Business Models)**
 - **Challenge:** To successfully withstand the risks of profit-eroding disruptions from technology-driven competitors for survival. Ability to sustain with higher volume growth, while pursuing the old business models and manually driven cost reductions.
 - **Focus:** Adopt business tactics befitting the emerging business trends while remaining within the constraints of legacy business models and technology, with cost optimisation/minimisation as the significant focus. In strategic terms, this business situation is called ‘Red Ocean.’
- **Competent (Old Technology and New Business Models)**
 - **Challenge:** To garner significant competitive advantages, withstand disruptions and elevate the effectiveness of the new business models with REPMG while operating with older technology and legacy systems.
 - **Focus:** Innovatively leveraging the new business model, extracting

maximum potential advantages from legacy technology, and minimizing risks.

- **1st Generation Enterprise (New Tech and Old BM)**
 - ▲ *Challenge:* To remain updated and agile in applying technologies and best deploy them to achieve the highest efficiency in value generation and risk minimisation while operating with the old business models.
 - ▲ *Focus:* Innovating within the realms of the old model to maximize the potential benefits from the new technology.
- **Digital Transformed (New Tech and New Business Model)**
 - ▲ *Challenge:* To remain agile, risk-free to the best extent possible and active with applications of relevant digital technologies in the journey for continuous innovation and to withstand the threats from cyber criminals.
 - ▲ *Focus:* To stay ahead of the competition by integrating and leveraging leading-edge technologies and shared stakeholders' value-based business and revenue models with the fast mover's advantages at all times. In strategic terms, this business situation is called 'Blue Ocean.'

Therefore, the journey path to be charted out is 'Incumbent' > 'Competent' > 'Digitally Transformed' business and revenue models, provided the threat of disruption is not imminent. Like many FMCG organizations in India, such entities can adopt a hybrid model to simultaneously operate with both 'Brick & Mortar' and digitally powered e-commerce routes. This is because the traditional physical and human-driven models are still fetching considerable revenue earnings.

There can be cases where an organisation garners adequate financial and human resources and speedy change management capabilities, duly supported by the Board of Directors. In that case, the second stage of digitally enabled competency for old business models can be skipped. For first-generational enterprises, complete DT at all times is the ultimate. The solution designs are with the adoption and applications of RPA, Blockchain, AIoTs, Generative AI, AI Agents, etc. Again, flexibility and agility are essential to keep all computing and digitalised systems and processes updated with the new versions and evolving DigiTechs to avoid redundancy and being left behind. In all these cases, the CMAs should be key leadership role holders from a dynamic business requirements perspective to:

- Ensure alignment of digital policies, strategies, and SOPs with the organisation's vision, mission, and culture, without compromising ethics, humane business dimensions and compliance with legal and regulatory provisions,.



- Plan, execute, navigate, track and monitor actual performance at the optimised costs for the desired ROI with embedded systems and tools for risk and compliance management.
- Initiate mid-course corrective measures and systems changes to minimise the impacts of adverse variances from planned goals and objectives.
- Upgrade the ICT and digital systems with agility to catch up with competitors and the dynamic needs of the external business ecosystem.

IMPERATIVES OF DIGITAL TRANSFORMATION AND ROLE OF CMAs

The narratives in this sub-section of the DTP have been divided into the following parts to facilitate understanding of the imperatives, roles, and responsibilities from the perspective of CMAs objectively meeting the organisation's expectations.

Digital Transformation Strategy

The DT strategies, duly aligned with the entity's vision and mission, can be crafted using attributes and input from the interplay of DigiTech policies, business strategies and goals. These are for long-term business operations, DigiTech adoption and applications and pervasive risk and compliance management. The result is maximum when orchestrated with the paramount objective of achieving all stakeholders' delight.

The execution tactics for such strategies will generally be of a similar nature when driven by aligned objectives, albeit different for different industry sectors. Additionally, cyber security is the most critical differentiating factor in a digitally transformed ecosystem for corporate business and Governmental agencies' brand image creation.

Globally acclaimed author *Rogers (2016)*⁸ believes that “*Digital transformation is not about updating your technology but about upgrading your strategic thinking. The DT Playbook shows how pre-digital-era companies can reinvigorate their game plans and capture the new opportunities of the digital world.*” CMAs must, therefore, attain competencies in collaborating with operating CXOs, digital and ICT teams and external technology partners. They must demand, contribute and help ensure realisations of maximum benefits from DT. Readers may refer to Chapter 9.12 of the author's Book4 to learn more about the quadrennium of thinking and strategic dimensions of DT.

Firm Inversion and Value Orchestration

It is a common global trend for large corporations not to perform all tasks

in-house for DT. Instead, collaborate with startups as digital technology partners, including startups through one or more strategic alliances (SA). They encourage young minds to innovate DigiTech solutions and front-end user apps by holding hackathons and rewarding success. There are instances of mergers and acquisitions post achieving success from SA.

Those new digital solutions are integrated with the firm's main ICT and DigiTech systems, including transactional blockchain platforms. Legacy firms concentrate more on innovating new business and revenue models powered by new digital solutions. For further cost savings, they also engage gig technology workers and moonlighters. CMAs must encourage, participate, and facilitate these processes to help fight disruptions, attain competitive advantages, implement cost-efficient processes, and accelerate the DT to create more value.

Collaborating with technology startups and other partners is termed 'Firm Inversion' and sharing the additional value generated by and between the partners 'Value Orchestration'. Cases in point are the neo banks. They wrap up traditional banks with front-end customer-centric digital solutions and help integrate with public digital infrastructure, such as the UPI of India, for payment banking and service deliveries. According to Marshall *et al.* (2021)⁹. *"The highest value digital transformation comes from firm inversion, that is, moving from value the firm alone creates to value it helps orchestrate. Cultivating a successful platform means providing the tools and the market to help partners grow."*

Digital Cerebralism with MVD and SCM

The present era is the era of digital cerebralism, with responsible and agile applications of digital technologies evolving at an overwhelming speed. Therefore, as briefly outlined in a previous section, the second most significant imperative for all four business framework elements is 'minimisation of value destruction' (MVD). This must be achieved by cerebral applications of strategic cost management (SCM), DigiTechs, and tools adopted for digitalisation and business transformation.

Entities in the highly regulated sectors like BFSI also integrate regulatory technology (RegTech) solutions to avoid prohibitively expensive, yet unreliable compliance management processes with human interventions. Besides active participation in all these to add incremental value, CMAs must also help the organisation strike the appropriate balance in cost-efficient deployment of Metaverse, Blockchain, AI-powered robotics, AI Agents, GenAI and RPA. Applications of these DigiTechs are for manufacturing, logistics management, service deliveries, marketing and other common internal service functions, e.g., Finance, HR, Legal, etc.

To achieve the objectives of MVD with cerebral applications of DigiTechs and RegTechs embedded with SCM tools, CMAs must contribute to adopting and applying tools and techniques that fit the dynamic needs of the internal and external business ecosystems. They are expected to perform the entire task of MVD and SCM, abiding by the following principles:

- Digital transformation with a cerebral and providential approach instead of attempting cost-cutting with knee-jerk reactions without assessing the long-term adverse impacts, including on employee morale.
- Apply the 'RAGE Analysis', as ideated by the author. This analysis helps identify and prioritise additional requirements for capital-intensive infrastructure, skilled manpower, software and funding. RAGE signifies "Requirements - Available = Gaps and prioritisation of the gaps requirements by the essential nature of the requirements" at different stages of the DT journey.
- Leverage the AI tools for predictive analytics to forecast business volumes using both legacy and digitally transformed systems and processes for optimum allocation of resources and fulfilling the 'Gaps' as identified by the RAGE Analysis
- Critical assessment and validation, to the extent feasible, of the endurability of the additional net positive financial impacts generated by shifting to DigiTech-enabled systems and processes. This is needed to ensure the realisation of the desired ROI for each DT project.

Creative Destruction and Manpower Redeployment

Besides meticulous yet ruthless cost optimization, CMAs must also work for creative destruction of all passive, dormant, and non-value-adding elements in different stages of value chain management. One critically important task would be the redeployment of surplus manpower arising from the applications of DigiTechs after training and reskilling. All these are to be done without:

- Directly or indirectly impairing operational effectiveness and efficiency in generating financial returns,
- Deterioration of the standards of services for all stakeholders in any manner at any point in time. and
- Compromising the entity's cultural values, ethical standards, and brand image.

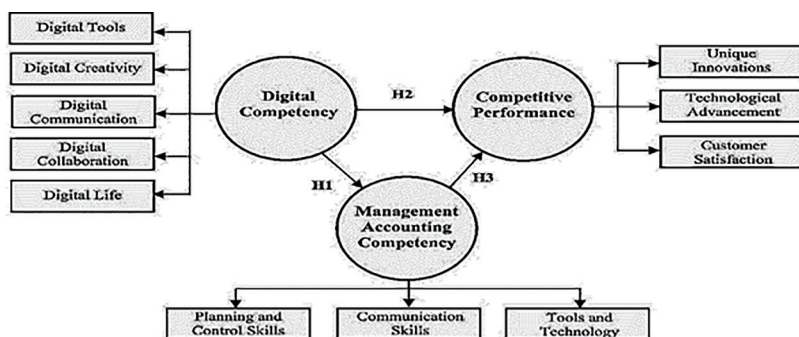
Blending Digital Competency with CMAs' Core Competencies

CMAs must blend digital competencies with their core professional competencies for cost and management accounting, auditing, and reporting.

This is critical to ensure success for the entity's DT project, in which they participate as the lead implementer representing the finance function. This unique blend of competencies is required for digital cerebralism and to discharge all responsibilities, as listed in this CMAs' DTP. They must keep themselves agile and updated with the developments in knowledge, skills, and competencies of both these domains, befitting the ecosystems of the organisation's needs or governmental agencies they are working for.

Interplay of Digital Competencies and CMAs' Competencies

GRAPHIC – 2*



*Source: <https://www.sciencedirect.com/science/article/pii/S219985312300269X>

The above graphic has been reproduced from the empirical research paper of Imzai *et al.* (2024)⁵. As the graphic and their writing suggest, they have studied the “*Intricate relationships among digital capabilities, management accounting competency and competitive performance, all within the context of the open innovation era.*” Their research was on the “*landscape of micropreneurs in Thailand*” with the help of 151 survey responses. The attributes they have considered for the three groups of competencies, H1 to H3 and hypothesis testing are limited in the context of ‘micropreneurs’ and need to be broadened for more universality. But the issues concerning CMAs, the two sets of competencies they studied and the hypotheses they tested are unique and interesting. Indeed, such research should also be conducted in the broader circumstances of India and the specific contexts of MSMEs and certain major industry sectors.

Cyber Security

The Government agencies of all countries and commercial corporations

are equally engrossed in fighting out and creating deterrents for digitally powered cyber criminals, weaponised digital technologies used to extract ransomware and for geopolitical cyber warfare. Safest cybers ecurity and data privacy will be the critical differentiating factors for a relatively higher product and corporate brand image for any DigiTech-enabled business model. The ability to provide near-zero-breach cyber security will be the best brand image creator, as ground-breaking innovations will. All these will help sustain with win-win competitive advantages, building trust, and safeguarding assets in an inter-connected digital world. Achieving this will also ensure fewer operational disruptions and savings in avoidable ransom payments to cyber criminals.

Digital Leadership

It is an established phenomenon that any finance professional, like a CMA, cannot succeed alone in any DT project since it is a team affair. On the other hand, being in a service function, CMAs' responsibilities to render services transcend all other functional areas and strategic partners in any company or governmental agency. Therefore, CMAs are expected to assume the functional leadership role to orchestrate, guide, help, and navigate all operations across the organisation towards sustainable prosperity with digitally transformed systems, processes, and business models.

GRAPHIC 3*



*Source: <https://www.sketchbubble.com/en/presentation-innovation-leadership.html>

According to the author⁴, CMAs' digital leadership “..... should become an effective catalyst for innovation and, by actions, foster co-creativity. Their passion for DT and conviction about ideated applications should be infectiously inspirational for team members.” The above Graphic suggests that a digital leader has to adopt different approaches to attain the targeted objectives, from leading oneself to leading the organisation. However, the methodologies and tasks to lead with each approach for different groups of role holders in different organisations will differ, depending upon the internal realities and related external business ecosystem. CMAs must accordingly

adapt themselves.

CMAs, as digital leaders, must also address the evils of the ‘Fear of missing out’ or ‘FOMO Syndrome.’ To ensure that no team member in any functional area suffers from this syndrome, CMAs have to logically convince that not all DigiTechs and tools are required by the organisation and that there is no need to mimic others driven by the ‘Me Too Syndrome.’ CMAs must work with the organisation’s CTO and CDO to handle these two syndromes successfully. This will help avoid unwanted capital expenditures and revenue expenses. One of their key arguments would be that DT is not a lipstick project to decorate the entity or a destination to reach, but a continuous journey in search of excellence for sustainable prosperity.

Change Management

The DTP for CMAs will remain incomplete until the change management task is added because it is a critical success factor. The common objectives of change management across organizations of any nature, particularly for DT, are to unite the organisation under the common belief and banner of the purposes and goals. It helps proactively achieve a state of readiness with winning grit, reduce employee resistance, attain the trust of stakeholders, and establish an adaptive, creative, innovative, and resilient internal business ecosystem.

Forrester, a globally reputed research and advisory firm, has concluded in one of its research papers, published by *Forbes* (2023), that “Organizations have learned the hard way that change management is critical for transformation success. However, *Forrester’s* research shows that traditional change management concepts are ineffective in tackling change resistance in digital transformation.... Transformation Managers don’t consider change a problem to manage, but rather a crucial skill to be built for organizations to thrive in an increasingly volatile world.”

Therefore, CMAs must develop strong change management skills and actively impart them within their teams. As key functional leaders, they should prioritize purposeful and effective communication and inclusivity while co-steering various initiatives to drive change management from a broader organizational perspective to facilitate implementing digital transformation projects with realised successes. Zillions of bites and tons of papers have been consumed for writing on various tasks for change management. Readers may read any published literature from credible sources, including the cited works of *Forrester* and the author.

CONCLUSION

The author firmly believes that digital transformation is essential for every



commercial organisation and government agency to contribute to the clarion call of fulfilling the noble aspiration of ‘Developed India 2047’ with the third-largest GDP. It is not a question of ‘should’ but ‘must’ for CMAs to participate in this revolution with all the needful application-oriented knowledge, skill sets, competencies and the right attitude. The author will be happy if this Chapter, particularly the Playbook, further helps CMAs to achieve a state of readiness. Some of its contents have inherent indications for potential themes to conduct empirical research and further establish the critical importance of the tasks and competencies included in the Playbook. The author will be happy to participate in such research work for the cause of our motherland

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SUSTAINABLE ENERGY TRANSITION – ROLE OF CMAs



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PREAMBLE

The energy sector is going through a flux globally. Climate change and global warming are fast turning into issues of serious concern, compelling a massive transition in energy mix. Sustainability, more than anything else, is taking centre stage in these debates, often ahead of other imperatives such as energy security, which, no less critical for developing countries like India, is receding from the centre stage to a close second position.

Starting from the Paris Climate Convention held in 2015 (COP21), countries have spelt out their respective Nationally Determined Contributions (NDCs) to combat the climate challenge. India was no exception. Two materially significant commitments made by India to be achieved by 2030 were (a) to enhance non fossil fuel based power generation capacity to at least 40 per cent and (b) to reduce the emission intensity of power generation by 33 per cent benchmarked to 2005. With these targets being clearly in sight, India further enhanced its commitment in the Glasgow Convention (COP26). Unlike many other countries, India seems to proceed steadily in the direction of achieving the commitments despite constraints.

In the longer term, countries are pronouncing a target year for achieving zero net emission. This is equivalent to committing absorption of the gross emission through cost effective technology for Carbon Sequestration (Capture) & Storage (CCS) or Utilization (CCU) or through natural means like intensive afforestation. While most developed countries have adopted 2050 as the target year for Net Zero, developing large economies like China and India have sought time till 2060 and 2070 respectively, for achieving this goal.

It is apparent that fossil fuel usage in India is likely to continue for at least two decades more than rest of the world. The obvious questions that arise are (a) what inhibits India to align with the rest of the world in phasing out usage of coal? and (b) Will such misalignment not trigger global headwinds?

GLOBAL WARMING

Scientists have established a definite correlation between accumulated emissions from the time of Industrial Revolution of Nineteenth Century and global warming. Accordingly, the share of each country in global warming is directly proportional to their share in accumulated emission and not the current emission. Viewed from this perspective the share of developed nations with a longer history of industrialization is much more than developing countries like India. Even at the current level of emission, India has a share of around 4 per cent in the cumulative global emission against a share of around 16 per cent of global population. This provides India the opportunity to argue for a larger share of the residual carbon space which is crucial for economic development.

One critical determinant of the energy transition pathway from fossil to non-fossil fuel is the per capita consumption of electricity in Kwh. There are broadly three categories of countries in various ranges of per capita power consumption namely:

1. High income advanced nations: 7000 to 15000 Kwh per person (North America, EU, UK, Japan, Australia etc)
2. Middle income countries: 4000 to 6000 Kwh per person (China, Brazil, etc)
3. Low income countries: Less than 4000 Kwh per person (India <1500 Kwh per person)

Category 1 countries have witnessed a point of saturation in terms of per capita energy consumption and witnessing a situation where addition to renewable power capacity aggressively leads to near commensurate replacement of fossil fuel based power capacity.

Category 2 countries are meeting the incremental energy demand largely through addition to renewable capacity with zero or marginally negative growth in fossil fuel based capacity. The demand for power in these countries is rising modestly. Accelerated addition to renewable capacity is expected to start knocking off fossil fuel based capacities in the not too distant future in these countries.

Category 3 countries, India being a prominent example, are sure to witness acceleration in per capita power consumption as their development agenda unfolds. Even reaching the World average will require the per capita power consumption to rise three fold. As projections from the Central Electricity Authority (CEA) indicate, even in the most optimistic scenario of addition to renewable capacity the coal based capacity will need to keep growing. Projections indicate coal consumption to rise from the current level of 1

billion tonne to around 1.5 billion tonne by 2030, marching further to a peak level of 2 billion tonne by 2040. The inflexion point for a reversal will have to wait till per capita power consumption trebles from the current level. Only thereafter, addition to renewable capacity will start replacing fossil fuel based capacity. This is expected to happen by 2047.

In other words, while most countries are witnessing or are likely to witness reduction in fossil fuel consumption currently or in the near to medium term, countries like India will witness rise in fossil fuel consumption in the medium term, primarily to secure energy security and to pursue development goals.

THE INDIAN PARADOX

The resultant effect of the energy road map for India will be rising levels of emission and higher contribution to climate change. This will inevitably attract severe headwinds from the developed world, which unless met through persistent rebuttal built on rational premises, can potentially impact the pace of economic development of the country. The role of CMAs can be crucial in this regard.

For CMAs and others advocating in favour of a fossil fuel roadmap directionally contrary to the rest of the world, require deeper understanding of measures for mitigating the adverse impact of emissions is imperative. The policy advocacy professionals will need to assertively argue with the policy makers at the national level in India to create an implementable road map for carrying out such mitigating measures in right earnest. The objective should be to contain the impact of emission to levels not beyond the current, if not even lower, despite the rising coal usage.

THE MITIGATING MEASURES

What are the mitigating measures? Characteristically, Indian coal is high in ash. The coalfields that are providing the bulk of coal currently and for tomorrow such as Talcher, Ib Valley, North Karanpura, Singrauli etc are even lower in heat value and higher in Ash content. Use of such coal, unprocessed for quality upgradation, yield sub optimal outcome in terms of emission and coal transportation. A substantial portion of transport cost is linked to transport of large quantities of inherent ash in coal, thereby rendered infructuous. The transport cost expressed in energy units such as Rs. per Giga Calories increases as ash in coal increases. This is also true for the GST compensation cess of Rs.400 per tonne fixed for all grades of coal, both domestic and imported. This cess in Rs per GCal is higher for coal with higher ash.

In addition, transport of high ash unprocessed coal results in deploying part of transportation resources for movement of excess ash. This is clearly infructuous



and avoidable. Reduction of ash in coal at origin, before transportation, therefore assumes critical significance in facilitating High Efficiency Low Emission (HELE) power generation technology, besides optimising cost of coal in Rs./GCal at power stations.

Despite Indian coal being inherently high in ash and the obvious benefits associated with washing of coal, only a fraction of thermal coal is washed in India. The reasons are historical and largely driven by lack of convergence in the perspectives of the coal producer and consumer. CMAs by training are often equipped to help drive convergence in thoughts of divergent stakeholders. The subject may therefore be of interest to this community.

COAL WASHING

Typically, power grade unwashed coal in India has ash in the range of 35 -40 per cent . Proper washing in state of the art washeries can bring down the ash to below 30 per cent with consistency of quality and size. The rejects from such washeries can be used for land filling purposes. The benefits of washing are manifold. Scientific research in the laboratory of National Institute of Advanced Sciences (NIAS), Bangalore has established that besides reduction of ash, washing leads to substantial reduction of pollutants like SO_x, NO_x and P2.5 particulate matter. Use of such washed coal in large scale clearly has the potential to mitigate adverse effects of usage of unwashed coal through lower emission.

Quite obviously, converting unwashed coal into washed coal has associated expenses in the form of capex, operating expenses and rejects. Nevertheless, the benefits in terms of reduction in specific consumption of coal, lower cost of ash handling and evacuation, lower emission, lesser wear and tear of boilers, besides lower cost of transport of coal from mines to power plant in terms of Rs/GCal clearly outweigh the costs associated with washing. This leaves scope for appropriate sharing of the benefits between coal producer and consumer that renders coal washing commercially viable.

It may be relevant to note that internationally coal is washed before selling. In other words, coal washing is a universal best practice. The price of coal rises almost exponential with higher heat value. Removal of ash and other impurities lead to rise in heat value enabling washed coal to command a much higher price that more than offsets all costs associated with washing. This renders coal washing a financially viable proposition for the coal producer.

How is coal price related to heat value internationally

At any given point of time, the rise in coal price is much faster than the rise in heat value. As an example let's consider the price of Indonesian coal of two

varieties of heat values (GAR) 4200 Kcal/Kg – US\$ 51.18 per tonne and 3400 Kcal/kg – US\$ 31.78 per tonne. In other words, for increase in heat value by 23 per cent, the coal price increases by 61 per cent. By interpolation, this works out price rise of 2.63 per cent for 1 per cent rise in heat value. If coal prices are expressed in energy units (Rs/GCal), the corresponding prices will work out to 12.18 \$/GCal and 9.35\$/GCal respectively, indicating increase of 30% for 23% rise in heat value. This price differential renders efforts for quality improvement a financially viable economic activity.

Let's turn to the situation in India. We consider the price of coal of at mid-point of Gross Calorific Value (GCV) range of 4150 Kcal/Kg and 3250 Kcal/Kg as notified by Coal India Ltd, the company which accounts for over 70 per cent of coal produced in the country. These prices are Rs.965 and Rs.758 per tonne. Converted to energy units these prices work out to Rs.233 per GCal for both levels of GCV. In other words there is no increase in price in energy terms for rise in heat value from 3250 to 4150 KCal/Kg. The increase of coal price at these levels of GCV rise by 27 per cent corresponding to exactly similar rise in heat value. Such linear rise in sharp contrast to the international trend of exponential rise as explained earlier tend to comprehensibly render heat value improvement through coal washing an infructuous exercise in India. Not surprisingly, a very small portion of power grade coal is washed in India.

CONCLUSION

Considering the critical importance of coal washing as a measure to mitigate anticipated headwinds to rising use of coal in India in the decades to come, revisiting the norms of coal pricing to render coal washing commercially viable needs to be carried out sooner than later. CMAs have a crucial role in creating a buy in among all stakeholders to make this happen in the best interest of the country.



THE ROLE OF CMAs IN ACHIEVING VIKSIT BHARAT-2047: A STRATEGIC CONTRIBUTION TO INDIA'S FUTURE GROWTH



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INTRODUCTION

As India sets its sights on the vision of Viksit Bharat-2047, the journey towards a developed and globally competitive nation hinges on the strategic integration of various elements—technological innovation, economic growth, sustainable infrastructure and inclusive prosperity. These elements must not only be envisioned but executed in a manner that is financially viable, operationally efficient and environmentally sustainable. In this endeavour, Cost and Management Accountants (CMAs) play an indispensable role. With their expertise in financial planning, cost management, risk mitigation and strategic decision-making, CMAs are key to realizing India's ambition of a fully developed, resilient and prosperous nation by its centenary of independence.

As Director Finance at NLC India Limited, a Navratna public sector enterprise and as a qualified CMA, this author had the privilege of closely engaging in the intersection of financial strategy, sustainable growth and corporate governance. NLC India Limited, with its involvement in energy production and sustainable projects, is committed to the Government's vision and the role of CMAs in ensuring the success of such strategic initiatives cannot be overstated.

HOW CMAs CONTRIBUTE MEANINGFULLY TO INDIA'S ASPIRATIONS FOR VIKSIT BHARAT-2047

This article examines how CMAs contribute meaningfully across various dimensions of the Government of India's aspirations for Viksit Bharat-2047, focusing on:

1. Technological Advancement, Innovations and Start-ups
2. Economic Growth and Prosperity – MSMEs



3. Modern and Resilient Infrastructure
4. Environmental Sustainability
5. Agricultural Innovation
6. Empowerment of Youth, Women and Marginalized Communities
7. Global Leadership

Each of these facets is crucial for India's future trajectory and the insights provided herein reflect the critical contributions of CMAs in steering the nation towards its goal of becoming a global leader by 2047.

1. Technological Advancement, Innovations and Start-ups

Technological innovation is the driving force of the Fourth Industrial Revolution and India's ability to harness cutting-edge technologies will be central to its goal of Viksit Bharat-2047. The Indian Government's push towards digitalization, smart manufacturing, renewable energy technologies and artificial intelligence offers unprecedented opportunities. However, realizing these opportunities requires sound financial oversight and strategic planning—areas where CMAs excel.

1.1 Financial Management in Technological Transformation

The adoption of new technologies requires significant capital investment and the financial viability of these investments must be carefully evaluated. CMAs play an essential role in the financial planning and cost management of technological advancements. At NLC India Limited, for instance, we are engaged in the adoption of renewable energy technologies and AI-powered operational processes. CMAs provide critical insights into the cost-benefit analysis of these technologies, ensuring that they not only align with the company's long-term vision but also remain financially sustainable.

By leveraging advanced financial modelling techniques, CMAs assess the return on investment (ROI) and payback periods, ensuring that technological investments are scalable and yield long-term economic benefits. Furthermore, CMAs evaluate the financial risks associated with technological changes, ensuring that companies adopt these innovations in a manner that mitigates potential financial exposure.

1.2 Supporting Start-ups and Innovation

Start-ups, particularly in the tech sector, often face challenges related to accessing capital, cash flow management and business scalability. CMAs



support start-ups by providing strategic financial oversight, offering guidance on cost optimization and preparing financial projections that enhance their credibility with investors and financial institutions. CMAs also assist in structuring financial plans that accommodate growth while minimizing financial strain, enabling start-ups to innovate while maintaining fiscal responsibility.

Moreover, CMAs guide the sustainable scaling of start-ups, ensuring that expansion efforts are aligned with efficient resource utilization, financial prudence and cost management. Through careful forecasting and risk management, CMAs contribute to the development of resilient start-ups that are financially sound and capable of sustaining innovation.

2. Economic Growth & Prosperity – MSMEs

Micro, Small and Medium Enterprises (MSMEs) are pivotal to India's economic framework, contributing significantly to employment, industrial diversification and regional development. Achieving sustained economic growth and prosperity necessitates the empowerment and growth of MSMEs, for which CMAs are instrumental.

2.1 Financial Strategy and Business Growth

While MSMEs are essential drivers of economic growth, they often face challenges related to financial planning, access to capital and cost control. CMAs offer indispensable expertise in streamlining financial operations through robust budgeting, cash flow management and working capital optimization. By instituting financial discipline, CMAs help MSMEs achieve greater financial stability, operational efficiency and scalability.

At NLC India Limited, we frequently collaborate with MSMEs, particularly in the supply chain and procurement sectors. CMAs help to ensure that these MSMEs are financially sound, providing insights into cost-effective methods of operations and identifying areas for financial improvement.

2.2 Enhancing Performance Measurement and Financial Viability

CMAs assist MSMEs in establishing financial KPIs (Key Performance Indicators) and benchmarking their performance against industry standards. By implementing financial performance measurement tools, CMAs empower MSMEs to identify weaknesses, optimize processes and make informed decisions that enhance profitability and competitiveness.

Moreover, CMAs help MSMEs access external financing through financial statements that meet the criteria of banks, investors and Government funding programs. This collaboration ensures that MSMEs can secure the capital

necessary for growth while maintaining fiscal discipline.

3. Modern & Resilient Infrastructure

India's infrastructure, from transportation and energy to urban development, is the foundation of its future growth. Achieving modern, resilient infrastructure will require substantial investment and CMAs are integral to ensuring that such investments are both financially feasible and sustainable.

3.1 Strategic Financial Structuring of Infrastructure Projects

Large-scale infrastructure projects, especially in energy and urban development, require complex financial structuring. CMAs evaluate capital raising options, public-private partnerships and debt-equity ratios to ensure that projects are adequately funded without compromising financial stability. CMAs also perform financial risk assessments, which are critical in identifying potential financial threats and mitigating them early in the project lifecycle.

At NLC India Limited, we manage substantial infrastructure projects in renewable energy generation. Our CMAs ensure that these projects adhere to strict financial parameters, both in terms of capital expenditure (CapEx) and operational expenditure (OpEx), ensuring they are completed on time and within budget.

3.2 Sustainable Investment and Cost Control

Infrastructure projects, particularly in the energy sector, demand careful monitoring of costs throughout the project's life cycle. CMAs implement cost control mechanisms and track budget variances to ensure that expenditures are contained within planned limits. By identifying inefficiencies early, CMAs contribute to the overall financial health of infrastructure projects, ensuring they remain profitable and sustainable.

Additionally, the long-term maintenance and operation costs of infrastructure projects are crucial considerations. CMAs integrate these ongoing costs into initial project financials, helping to build infrastructure that remains viable and efficient long after construction is complete.

4. Environmental Sustainability

Environmental sustainability is the cornerstone of India's future development, with an emphasis on clean energy, green technology and climate resilience. As businesses increasingly adopt sustainable practices, CMAs play a vital role in integrating environmental concerns into financial strategies.

4.1 Green Accounting and Financial Reporting

Green accounting, or the practice of incorporating environmental costs into



financial decision-making, is an essential component of sustainable business practices. CMAs assist organizations in green accounting by ensuring that costs related to carbon emissions, resource consumption and waste management are accurately reflected in financial statements.

At NLC India Limited, for example, we are involved in solar power generation, where CMAs assess the long-term financial impact of transitioning to renewable energy sources. By quantifying the economic benefits of sustainable energy, CMAs ensure that the company not only meets its environmental targets but also remains financially viable.

4.2 Sustainability in Investment Decision-Making

CMAs support businesses in evaluating the financial viability of investments in green technologies. This involves performing detailed cost-benefit analyses to ensure that the adoption of sustainable practices is both economically and environmentally beneficial in the long term.

5. Agricultural Innovation

Agriculture remains a critical sector of India's economy, employing a significant portion of the population and contributing to food security. However, challenges such as climate change, resource depletion and low productivity necessitate innovation in agricultural practices. CMAs could contribute in the following manner.

5.1 Financial Management for Agricultural Projects

Agricultural innovation often requires significant investment in technology and infrastructure. CMAs provide financial insights into the feasibility of these investments, evaluating whether innovative practices such as precision farming or smart irrigation systems provide a sustainable return on investment.

5.2 Risk Management in Agriculture

The agricultural sector is highly susceptible to weather-related risks. CMAs assist farmers and agribusinesses in managing these risks through crop insurance, hedging strategies and diversification of income sources, ensuring financial stability despite the uncertainties of nature.

6. Empowerment of Youth, Women, and Marginalized Communities

The empowerment of marginalized communities is a critical pillar of India's growth. CMAs contribute significantly by promoting financial inclusion and providing financial literacy programs.



6.1 Financial Literacy and Economic Inclusion

By conducting financial literacy programs for youth, women, and marginalized groups, CMAs ensure that individuals have the tools to make informed financial decisions, thus promoting greater participation in India's growing economy.

6.2 Supporting Social Enterprises

CMAs also assist social enterprises in scaling their operations, providing financial strategies that align with their social objectives while ensuring economic viability. Through careful financial planning, CMAs help these enterprises build sustainable business models that can generate both social and financial value.

7. Global Leadership

India's aspirations for global leadership necessitate its businesses and institutions adopting international best practices and engaging more actively in global trade and economic diplomacy.

7.1 Financial Oversight for Global Expansion

CMAs facilitate global competitiveness by supporting businesses in international trade, managing cross-border taxation and ensuring compliance with global financial standards. By structuring global supply chains and advising on international investments, CMAs help Indian enterprises expand their reach on the world stage.

CONCLUSION

The role of Cost and Management Accountants (CMAs) in realizing the vision of Viksit Bharat-2047 is multifaceted, encompassing areas of financial strategy, innovation, risk management and social empowerment. CMAs are uniquely positioned to contribute to the economic, environmental, and social dimensions of India's growth, ensuring that the nation's transformation is sustainable, inclusive, and globally competitive. As India moves towards becoming a developed economy by 2047, CMAs will be essential in guiding organizations through the complexities of technological advancements, infrastructure development, agricultural innovation, and financial sustainability. Their expertise will remain central to achieving the vision of a prosperous, resilient, and global India.



CMA^s IN POLICY, PERFORMANCE AND PROGRESS!



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EXECUTIVE SUMMARY

As India stands on the threshold of its centenary of independence in 2047, the national vision of a “Viksit Bharat” (Developed India) embodies the aspirations of economic strength, social equity, technological prowess and environmental sustainability. At the heart of this transformative journey are Cost and Management Accountants (CMAs), professionals whose expertise in cost optimization, fiscal planning, performance evaluation and strategic risk management make them the ideal partners for bridging the gap between policy formulation and operational efficiency.

This article presents a comprehensive roadmap that highlights the multifaceted role of CMAs in supporting India’s transformative agenda. From enhancing public sector financial management and enabling the growth of Micro, Small, and Medium Enterprises (MSMEs) to spearheading digital transformation and sustainability initiatives through Environmental, Social, and Governance (ESG) frameworks, CMAs are poised to be strategic efficiency partners at every level of national development. Institutional reforms and capacity-building measures are also proposed for a seamless integration of the profession into policymaking, program evaluation and skill development initiatives. In a nation aligned with digital transformation, sustainable development and global competitiveness, CMAs emerge not merely as financial controllers, but as nation builders and change enablers who can help India achieve its ambitious 2047 vision.

1. INTRODUCTION: ENVISIONING VIKSIT BHARAT 2047

India’s journey towards becoming a fully developed nation is anchored in an unwavering commitment to inclusivity, sustainability and innovation. As the country prepares to celebrate 100 years of independence, the vision of Viksit Bharat 2047 transcends mere economic growth—it embodies a comprehensive paradigm that includes social justice, technological leadership and environmental stewardship. This ambitious transformation demands a holistic approach where every policy decision and operational initiative is

guided by data and executed with cost efficiency.

Prime Minister Narendra Modi has articulated a bold, collective vision for India's future under the banner of a developed nation by 2047. Note his inspiring words:

“If 140 crore citizens of my country set out with a resolution, determine a direction and march forward step by step, shoulder to shoulder—no matter how great the challenges or how intense the scarcity of resources—we can overcome every challenge and build a prosperous Bharat to achieve the goal of a ‘Viksit Bharat’ by 2047. We must align our aspirations and our efforts to ensure that the 21st century, destined to be the century of Bharat, becomes a ‘Swarnim Bharat’

(Golden India), and make ‘Viksit Bharat’ in this century and advance towards fulfilling those dreams.”

In this transformative context, the role of CMAs has evolved far beyond traditional compliance functions. Today, CMAs serve as strategic economic navigators who integrate cost accounting, budgeting and performance audits into the very fabric of public governance and business operations. Their analytical expertise not only optimizes resource utilization and minimizes wastage but also fosters proactive, data-driven decision-making across all sectors. The subsequent paragraphs detail how the multifaceted contributions of CMAs will serve as critical catalysts in realizing this national dream.

2. CMAs AS NATION BUILDERS

The transformation from a developing to a developed nation is anchored on robust financial discipline and strategic resource management. Historically, the CMA profession has been perceived as a compliance-oriented function. However, over the decades, CMAs have emerged as pivotal strategists in both the public and private sectors.

CMAs have significantly contributed to India's vision of Viksit Bharat 2047, showcasing their expertise in leadership roles across key sectors. Professionals like CMA D.K. Sarraf, the former Chairman of ONGC and later the Chairman of Petroleum and Natural Gas Regulatory Board (PNGRB), and CMA R.S. Sharma, the ex-Chairman of ONGC, have shaped India's energy sector by driving strategic growth and efficient resource management. CMA Harjeet Kaur Joshi, who held the position of the Chairperson and Managing Director (CMD) of the Shipping Corporation of India (SCI) and CMA Pomila Jaspal, the first woman Director (Finance) of ONGC and former Director (Finance) at Mangalore Refinery and Petrochemicals Limited (MRPL), exemplify the role of CMAs in advancing finance and leadership. They have paved the way for innovation and inclusion in top management roles in the oil and

shipping industries.

Others like CMA Pawan Kumar, Chief Advisor (Cost) in the Department of Expenditure, Ministry of Finance, and CMA (Dr.) T.V. Somanathan, Finance Secretary, have been instrumental in advancing financial reforms and public policy, aligning national expenditure and economic frameworks with sustainable development goals. Meanwhile, global leaders like CMA Krupa Venkatesh, Senior Director (Partner) at Deloitte India, highlight the international recognition of CMA expertise, contributing to impactful strategic initiatives. Collectively, these professionals showcase the critical role CMAs play in empowering India's journey toward a prosperous and self-reliant future.

Under the framework of the Cost and Works Accountants Act, 1959, the Institute of Cost Accountants of India (ICMAI) has been instrumental in fostering a cadre of professionals who possess deep expertise in cost structures, performance evaluations and risk management. Today, CMAs are expected to offer much more than traditional ledger management; they must lead in establishing transparent, accountable and sustainable financial systems at multiple governance levels—from local committees to national economic corridors. Their involvement in cost-benefit analysis, resource rationalization and fiscal forecasting will be crucial in aligning expenditures with national priorities as India embarks on its growth journey towards 2047.

3. STRATEGIC CONTRIBUTIONS OF CMAs IN VIKSIT BHARAT 2047

The role of CMAs in this transformative agenda is not confined to a singular domain; rather, it spans a spectrum of strategic areas. The following paragraphs illustrate their comprehensive contributions:

3.1 Public Sector Financial Management and Transformation

Enhancing Fiscal Discipline: In public sector undertakings (PSUs), local Government bodies and Central Government schemes, the application of sophisticated cost management techniques is essential. CMAs can guide financial reforms by implementing methodologies such as zero-based budgeting (ZBB) and outcome-based budgeting. These techniques ensure that every rupee is accounted for and that spending aligns with intended outcomes.

Performance Evaluation: By conducting rigorous performance audits of Government schemes—such as social welfare initiatives and infrastructure projects—CMAs can provide feedback on the efficiency of public programs. Their evaluations can help minimize wastage, streamline resource allocation, and ultimately drive better citizen outcomes. Their inclusion in advisory

panels such as those convened by the Comptroller and Auditor General (CAG) reinforces fiscal transparency and operational accountability across the board.

Public Policy Advisory: CMAs have the potential to serve as invaluable consultants in policy formulation. They can advise Ministries on expenditure reforms, subsidy rationalizations and revenue optimization strategies. By working closely with budgeting divisions and economic think tanks like Niti Aayog, CMAs can help design and monitor policies that are both equitable and efficient.

3.2 MSME and Start-up Empowerment

Enhancing Competitiveness for MSMEs: Micro, small, and medium enterprises are recognized as the backbone of the Indian economy. Representing nearly 30% of the national GDP and a significant portion of exports, the vibrancy and resilience of MSMEs directly contribute to economic growth. However, challenges in cost control, working capital management, and accessing finance are commonplace in this sector.

Cost Optimization and Business Restructuring: CMAs can step into this arena by helping MSMEs prepare detailed cost sheets, evaluate their working capital needs and execute cost rationalization techniques. Their role in credit risk assessment not only helps these businesses become bankable but also ensures that they remain competitive in an increasingly globalized market.

Institutional Support Mechanisms: One innovative proposal is the establishment of District-level CMA helpdesks integrated within MSME clusters. Such centers would provide ongoing consultancy services, unravelling financial complexities to bolster competitiveness and productivity within the MSME ecosystem.

3.3 ESG and Sustainable Development

Integrating Sustainability into Financial Models: As global investment trends increasingly focus on sustainability, the integration of Environmental, Social, and Governance (ESG) frameworks into financial planning is imperative. CMAs are uniquely positioned to design and implement ESG accounting frameworks. These frameworks help to track carbon emissions, perform lifecycle costing, and measure the social return on investments (SROI) across sectors.

Enhancing Regulatory Compliance: By embedding ESG key performance indicators (KPIs) into routine performance measurement systems, CMAs ensure that businesses and Governmental bodies not only meet regulatory compliance but also work towards long-term sustainability targets. Their guidance is especially pertinent in formulating policies like green budgeting and carbon taxation that align with India's Net Zero commitments.

3.4 Digital Transformation and Technological Innovation

Leveraging Industry 4.0: The advent of the fourth industrial revolution demands that CMAs be tech-savvy. Digital transformation in accounting processes is now driven by advanced technologies such as artificial intelligence (AI), blockchain and the Internet of Things (IoT). These technologies enable the creation of real-time costing systems, digital dashboards and automated cost allocation mechanisms crucial for modern public procurement processes.

Data-Driven Decision Making: By integrating data analytics into cost audit processes, CMAs can help organizations track financial inefficiencies, benchmark industry performance and pre-empt potential distress signals. This capacity to harness big data not only optimizes cost management but also supports proactive business strategies, thereby making a significant contribution to the broader economic framework of Viksit Bharat 2047.

Facilitating Digital Ecosystems: With India's robust digital infrastructure—exemplified by initiatives like Aadhaar, Unified Payments Interface (UPI), and the Open Network for Digital Commerce (ONDC), CMAs can collaborate with both Government and private sectors to digitize financial interfaces. This integration is key to ensuring that infrastructural costs are not only transparent but also dynamically managed in keeping with digital innovations.

3.5 Modern Infrastructure and Urban Development

Evaluating Large-Scale Projects: India's infrastructural ambitions require investments exceeding \$1.5 trillion in sectors such as transport, energy, logistics, and urban development. CMAs can provide critical financial modelling expertise to assess the economic viability of large-scale projects. Through lifecycle costing, cost-benefit analysis, and Public-Private Partnership (PPP) frameworks, CMAs facilitate a robust evaluation process that mitigates financial risk and ensures optimal value delivery.

Supporting Smart Cities and Urban Renewal: As urban centers evolve into smart cities, the role of CMAs in guiding financial planning and resource allocation cannot be understated. Their inputs enable the formulation of sustainable urban policies that balance developmental goals with fiscal discipline, ensuring that infrastructure investments translate into tangible improvements in quality of life.

3.6 Agricultural Innovation and Rural Economy

Optimizing Agri-Investments: Agriculture remains the cornerstone of India's socio-economic fabric. The incorporation of cost analytics in agritech initiatives and supply chain optimization can significantly improve the livelihoods of farmers. CMAs can evaluate the financial feasibility of irrigation projects, storage facility investments, and rural infrastructure, thereby streamlining

the agricultural value chain.

Supporting Farmer Producer Organizations (FPOs): With many rural enterprises facing challenges in procurement and logistics, CMAs can provide specialized consultancy to Farmer Producer Organizations. By offering advice on cost management and financial planning, they empower these groups to negotiate better market terms and enhance their bargaining power.

3.7 Inclusive Development and Empowerment Initiatives

Fostering Financial Literacy: Inclusive growth is central to Viksit Bharat's vision. CMAs can contribute to broad-based financial education by designing cost-efficient models for skill development programs. Initiatives such as community-based cost clinics and targeted training programs for women, youth, and marginalized communities enhance financial literacy and ensure that economic growth is both equitable and sustainable.

Empowering Future Generations: Through mentorship and the establishment of programs like "Young CMA Leader Programs," experienced professionals can pass on their expertise to younger generations. Such initiatives help in creating a future-ready cadre of professionals who can navigate the complexities of both local and global financial landscapes, thereby embedding resilience into the nation's developmental framework.

3.8 Global Leadership and Competitiveness

Aligning with International Standards: As Indian enterprises expand into global markets, there is an increasing need to comply with international reporting and costing standards. CMAs offer strategic guidance in transitioning to frameworks such as the International Financial Reporting Standards (IFRS) and managing transfer pricing mechanisms. Their advisory role ensures that businesses remain competitive in global value chains by maintaining robust cost controls.

Representing National Interests: Through the International Affairs Board of the ICAI, Indian CMAs are actively engaged in multilateral forums such as the International Federation of Accountants (IFAC), SAFA, and CAPA. These engagements help in advocating for India's perspectives on sustainability, taxation, and digital financial regulations, thereby positioning the country as a responsible and innovative economic leader on the global stage.

4. CMAs IN POLICY FORMULATION AND FISCAL MANAGEMENT

An effective fiscal environment is vital to sustaining economic momentum during India's journey toward Viksit Bharat. Here, CMAs play a dual role as both executors and overseers of public financial policies.



Designing Resilient Financial Systems: CMAs can serve as key advisors in planning and executing public budgets, ensuring that cost–benefit relationships are clearly defined and that resource allocations drive measurable outcomes. Their expertise supports designing subsidy rationalization schemes and public expenditure reviews that are not only equitable but also aligned with strategic priorities.

Fostering Decentralized Governance: The decentralization of fiscal decision-making has the potential to create more responsive governance frameworks at the state and local levels. CMAs, by advising on revenue-sharing models and performance-based grant formulas, help to align local Government initiatives with national objectives. At the same time, their involvement in tax reform initiatives—such as studies on GST, carbon tax, and digital transaction levies—ensures that reforms are both compliant with economic equity and reflective of ground realities.

Bridging Fiscal Policy and Operational Execution: In collaboration with economic think tanks, Ministries, and Budget Divisions, CMAs drive the implementation of policies while mitigating operational risks. Their ability to translate broad policy imperatives into actionable cost models is critical for ensuring that every investment or subsidy is backed by robust fiscal analytics. This dual role makes them indispensable in the design, monitoring, and eventual recalibration of government programs.

5. CAPACITY BUILDING AND NATIONAL SKILL DEVELOPMENT

The foundation of a sustainable Viksit Bharat lies in nurturing talent and continuously upgrading the skills of cost professionals. It is imperative that the profession adapts in tandem with rapid technological and economic changes. The following approaches are proposed:

Modernizing the CMA Curriculum: To remain relevant in an era dominated by digital transformation and sustainability, the curriculum for CMA professionals should be periodically updated. Essential modules in artificial intelligence (AI), blockchain technology, forensic audits, ESG reporting and digital financial systems will equip future CMAs with the skills necessary for modern-day challenges.

Expanding Professional Certifications: ICAI can introduce sector-specific certifications—such as in green finance, Fintech and infrastructure cost modelling—to acknowledge the diverse roles CMAs play in a transforming economy. These certifications will not only enhance the professional standing of CMAs but also act as a bridge between academic knowledge and real-world applications.

Fostering Partnerships with Academia and Industry: Collaborations with educational institutions, research bodies and industry associations (such as



FICCI and CII) can drive innovation in cost management and public policy. Joint research initiatives, online micro-certification programs, and “Earn While You Learn” models in partnership with the National Skill Development Corporation (NSDC) are essential to nurture a future-ready workforce. Such collaborations ensure that the theoretical underpinnings of cost management principles are effectively integrated with on-ground practices.

Institutional Capacity Building: The establishment of District Cost Clinics and Centres of Excellence, especially in Tier-2 and Tier-3 cities, serves a dual purpose. Firstly, it provides localized support to small businesses and Panchayati Raj Institutions and secondly, it acts as a training ground for professionals to apply advanced cost analytics in real-world settings. Initiatives like these empower local communities and ensure that the benefits of efficient cost management are disseminated widely.

6. ROADMAP: ICAI'S MISSION 2047

To harness the full potential of CMAs as drivers of India's transformative journey, the Institute of Cost Accountants of India (ICMAI) must adopt a structured, forward-looking strategy under the theme “*Mission 2047: Empower, Collaborate, Transform.*” This roadmap comprises three key pillars:

Empower

- **Professional Development:** Institute mandatory professional development programs that include advanced training in digital tools, ESG accounting and innovative costing techniques.
- **Digital Labs and Virtual Simulations:** Establish virtual labs where CMAs can use state-of-the-art cost modelling and digital audit simulations to tackle futuristic scenarios.
- **Sectoral Certifications:** Implement sector-specific certifications to foster expertise in areas such as green finance, fintech, and infrastructure.

Collaborate

- **Public–Private Partnerships:** Expand collaboration with Government bodies across various ministries such as Finance, MSME, and Power. Joint projects will harness combined expertise to embed cost management in policymaking and infrastructure planning.
- **Academic and Industry Alliances:** Develop strong linkages with universities, IITs, and industry bodies like FICCI and CII to co-create innovative research that bridges theory with practice.
- **International Engagements:** Leverage ICAI's international affiliations (e.g., IFAC, SAFA, CAPA) to align India's cost accounting practices with global standards, thereby ensuring competitive integration into the



international economic arena.

Transform

- **Grassroots Initiatives:** Launch programs such as “Young CMA Leader Programs” to nurture talent from school and college levels, ensuring a pipeline of future professionals who are adept at leveraging new technologies and innovative practices.
- **Regional Centres of Excellence:** Open specialized centres in smaller cities to promote cost analytics, ESG accounting and AI-based financial forecasting. These centres would act as both resource hubs and training institutes regionally.
- **Annual Impact Monitoring:** Publish an annual CMA Impact Report that quantifies contributions in terms of Government cost savings, improvements in MSME performance, adoption levels of ESG practices, and overall economic efficiencies realized through digital innovations.

7. RECOMMENDATIONS AND WAY FORWARD

For India to fully harness the potential of CMAs in achieving the Viksit Bharat vision following strategic recommendations must be heeded:

- **Institutional Reform:** Establish dedicated CMA cells within each Ministry to integrate cost and financial analytics into policy making processes. Their role should extend beyond advisory to that of an active monitoring entity for fiscal discipline.
- **Policy Integration:** Integrate CMAs into critical decision-making bodies, including District Planning Committees, State Finance Commissions, and CAG audit panels. In this manner, every major economic decision, from subsidy design to infrastructure investments, will be backed by robust cost analysis.
- **Enhanced Skill Development Initiatives:** Accelerate curriculum modernization and launch nationwide initiatives that impart next-generation skills, with a strong emphasis on digital and ESG competencies.
- **Collaborative Research and Innovation:** Encourage joint research programs with academic institutions and industry bodies to develop innovative models for cost optimization, data analytics, and sustainable development measures.
- **Outreach and Awareness:** Create platforms for continuous dialogue between Government agencies, industry practitioners, and cost professionals. Town hall meetings, mentoring sessions and regular workshops can foster an ecosystem of shared learning and transparent communication.

By implementing these recommendations, CMAs can, not only serve as vigilant custodians of the nation's finances, but also as dynamic partners in driving socio-economic progress.

8. CONCLUSION: CMAS AS THE TORCHBEARERS OF A TRANSFORMED NATION

As India marches towards 2047, the vision of Viksit Bharat is a clarion call for transformation—one that hinges on thoughtful governance, innovative strategies and inclusive growth. Cost and Management Accountants, with their unparalleled expertise in strategic cost management, data analytics, and performance evaluation, are uniquely positioned to be the torchbearers in this national renaissance.

In an era characterized by rapid technological evolution, shifting global paradigms and complex socio-economic challenges, CMAs are not simply number crunchers; they are architects of change. Their contributions will ensure that every public policy, every infrastructure project and every enterprise decision is underpinned by rigorous cost discipline, transparency and a forward-looking perspective. Whether it is in streamlining public expenditure, empowering MSMEs, or integrating sustainability into business models, the role of CMAs is both comprehensive and indispensable.

The journey to a developed, inclusive and sustainable India is a shared endeavour that calls for collaborative action between Government, industry, academia and dedicated professionals. With the strategic reforms, capacity-building initiatives, and innovative partnerships proposed in this paper, CMAs will not only strengthen the economic fabric of the nation but also elevate India's stature on the global stage. Viksit Bharat 2047 is not merely a dream—it is an actionable roadmap that envisions a future where every rupee is judiciously managed and every citizen reaps the benefits of a robust, transparent, and modern financial ecosystem.

In this transformative era, let the commitment of CMAs serve as the bedrock for national progress. Through empowering policies, collaborative initiatives, and transformative practices, the profession of cost and management accountancy will continue to evolve and lead, ensuring that the vision of Viksit Bharat is realized with precision, passion, and unparalleled dedication.

We stand ready – as trusted financial stewards and strategic innovators – to contribute our expertise to crafting a nation that is equitable, competitive, and visionary. The path to Viksit Bharat 2047 is illuminated by the diligent efforts of CMAs who, acting as catalysts for change, will help shape a future that is fiscally disciplined, socially inclusive, and globally competitive.

CMAs - THE CATALYSTS OF VIKSIT BHARAT 2047



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The vision of a “Viksit Bharat 2047”, unveiled by Hon’ble’ PM Sh Narendra Modi, is a call for action – action for inclusive, sustainable, and high-impact development. This vision is not only about economic growth, but about creating a nation that performs well on all fronts – technology, inclusiveness, environment, and global competitiveness. This mission will require focused initiatives across sectors, with exceptional delivery on planning, financial prudence, and accountability.

The Government of India has already set the stage for this transformation with a multi-dimensional approach – ranging from technological advancement and modern infrastructure to environmental sustainability. The momentum is clearly in motion. These initiatives serve as a strong foundation.

In this context, I believe CMAs are well placed to play a vital role. With their training in cost optimization, value creation, and performance evaluation, CMAs can work as key enablers on multiple fronts – from policy execution to private sector transformation, from grassroots initiatives to national-scale programs. CMAs as a fraternity can build on the groundwork done by GOI to help achieve the ambitious goal of a Viksit Bharat by 2047. And this will not be the first time that CMAs would be working with the GOI as the architects of financial integrity.

As is well known now, during World War II, the Indian government sought our Institute’s help in reviewing cost-plus contracts, which involved reimbursing costs plus a profit for military procurements. This engagement was the early recognition of the importance of Cost Accountancy – it highlighted the importance of cost and management accounting in ensuring efficient and transparent financial management, particularly in large organizations like the military.

TECHNOLOGY

India’s rise as a technology powerhouse rests not only on innovation but also

on intelligent implementation. The Government has already laid a robust digital foundation for the ecosystem by disruptive innovations (including UPI, Aadhaar, e-Kranti, PM Mudra etc.) that have earned India laurels on international stage. The next phase of growth is expected to come from the advanced technologies, and India is well positioned to spearhead that revolution.

Emergence and scale-up of multiple world-class national platforms brining enormous benefits and convenience to ordinary citizens



Technologies like AI, ML, and automation are revolutionizing every sector, from manufacturing to financial services. According to industry reports, AI could add nearly \$1.5 trillion to India's GDP by 2030. However, realizing this potential requires judicious allocation of resources (our time, talent and energies) and razor-sharp focus on impact.

GOI has also put impetus on this front, launching the IndiaAI mission – which aims to build a comprehensive ecosystem that fosters AI innovation by democratizing computing access, enhancing data quality, developing indigenous AI capabilities, attracting top AI talent, enabling industry collaboration, providing startup risk capital, ensuring socially impactful AI projects and promoting ethical AI. With the approval of the IndiaAI Mission in 2024, the Government has allocated Rs. 10,300 Crs. over five years to strengthen AI capabilities. That should tell us where the next opportunities lie in technology. The key here is not just the latest technology, but the strategies to harness its full potential. And that's where CMAs come in.

One can see CMAs bringing immense value in this aspect – both as an enabler and as a user. As an enabler, CMAs can evaluate the cost-effectiveness of AI/ML adoption, ensure ROI through analytics led forecasting and facilitate technology transformation without fiscal excess. This helps in avoiding bottlenecks and expediting the adoption and implementation of AI initiatives.



As a user, CMAs are well-equipped to design tech-driven performance dashboards, automate costing systems and support organizations in building digital-first governance frameworks. Even for Government-led programs (like Digital India and BharatNet), CMAs can use the latest technologies to ensure timely execution, transparency and financial integrity. Imagine CMAs as the GPS guiding the organization through the maze of tech transformation—optimizing, assessing, and steering the ship.

EMPOWERING INNOVATION AND STARTUPS

Over the last decade, India's startup ecosystem has experienced an unprecedented growth, emerging as the third largest in the world with over 1,00,000 startups and more than 100 unicorns.

Fuelled by innovation, digital adoption, and strong Government support with programs like Startup India, this phase has witnessed rapid scaling and bold experimentation. The landscape is now evolving though, giving way to a more mature ecosystem that emphasizes governance, profitability, and financial sustainability and not only on valuation. Investors today are seeking returns, along with potential. They are demanding sound unit economics, robust internal controls and business models that can weather macro-economic shifts.

CMAs have a key role in this landscape by bringing in the critical financial stewardship, with their expertise in cost structures, risk analysis, and financial planning. As many startups operate on tight margins and aggressive growth models, CMAs provide the frameworks for risk management, unit economics analysis, and financial modelling. They can also help align innovation with ESG goals, which is increasingly important for global investors. As startup incubators and VCs look for financially sound innovations, CMAs can act as the bridge between ambition and accountability.

CMAs could help startups build strong foundations—enabling them to scale with discipline and purpose. *After all, a rocket needs not just fuel to launch, but also navigation to reach orbit. CMAs can be that navigation system for startups.*

CMAs AS ENABLERS OF GREEN GROWTH (ESG)

India has committed to achieving net zero emissions by 2070 and expanding its renewable energy capacity to 500 GW by 2030. Environmental sustainability has now become a business imperative, not just a compliance requirement. The same is evident by the enhanced focus and weightage of ESG by rating agencies and investors alike. Sustainability isn't just about reducing carbon footprints—it's about embedding it into the very fabric of business.

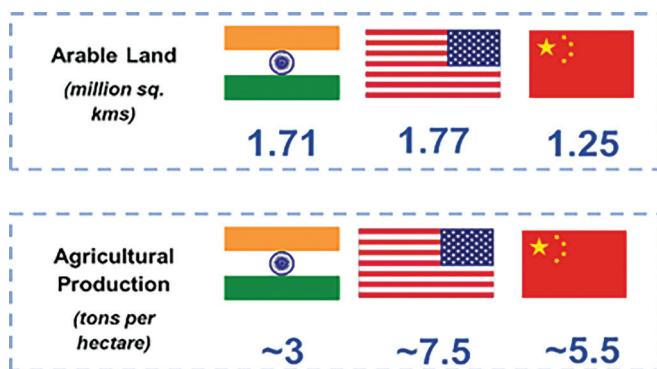
CMAs again can play the dual role of implementation and support. On the initiatives front, CMAs can lead by identifying cost-effective decarbonization strategies, they help companies reduce emissions without hurting profitability. For instance, in sectors like manufacturing and logistics, CMAs are vital in implementing circular economy models and energy efficiency programs.

On the support end, CMAs are aptly placed to spearhead the adoption of green accounting, carbon costing, and ESG disclosures. Further, CMAs can ensure that CSR and sustainability projects are financially sound, scalable, and outcome-oriented, thereby aligning corporate behaviour with national climate goals.

There are three sectors which are critical for a wholesome, inclusive development of India – Agriculture, Healthcare and Education. There are immense growth opportunities in these sectors, and only a well-rounded development in these sectors will make Bharat a Viksit nation in true sense.

TRANSFORMATION IN AGRICULTURE

India's arable land is almost equal to the USA, and 30-35 per cent larger than our neighbour China. But today, our productivity (in terms of tons per hectare) lags much behind our fellow nations. By focusing entirely on the productivity, India has an opportunity to contribute another ~500 billion USD to its GDP.



On the workforce side, more than 55 per cent of India's workforce is engaged in agriculture; yet the sector contributes only around 18 per cent to GDP. This indicates there's a significant opportunity to increase the productivity / output / contribution of this sector. Doubling farmers' income and improving rural livelihoods will however require a cost-efficient transformation of the agri-value chain.

CMAs can in-fact drive this transformation by bringing transparency in



procurement, optimizing supply chains, and helping Farmer Producer Organizations (FPOs) with costing, inventory planning and market linkages. In the context of agri-tech solutions, there are now countless solutions available that can and need to be, implemented at scale. Precision farming, satellite irrigation, agribots fleet, sensors attached to animals, drone monitoring etc. — all these initiatives can be adopted in scale with the support of CMAs – who can evaluate the ROI, cost-benefit analysis, and scalability of these solutions under different contexts.

Moreover, CMAs can help agricultural cooperatives and rural enterprises in financial literacy, budgeting, and subsidy optimization, thus empowering our rural India with tools for self-reliance.

HEALTHCARE: AFFORDABLE, ACCESSIBLE AND ACCOUNTABLE

With the rollout of Ayushman Bharat and digital health IDs, India aims to build a healthcare ecosystem that is inclusive and tech-enabled. With 5G and AI at the centre, facilities like predictive diagnosis, virtual health assistants, personalized treatments, drug discovery, remote monitoring etc. are there to be scaled for masses.

However, rising costs and unequal access remain pressing challenges. Again, CMAs can play a critical role in hospital costing, health policy budgeting, and optimizing public health expenditure. Their ability to link outcomes with costs ensures that programs remain both effective and efficient.

From pharma supply chains to insurance pricing models, CMAs ensure financial sustainability across the healthcare value chain. As I mentioned, healthcare should be affordable – but it should also be sustainable, and that’s where CMAs come in to balance the books.

EDUCATION: CMAs AS KNOWLEDGE PARTNERS

India’s demographic dividend is its biggest strength and the most critical enabler to achieve the Viksit Bharat 2047 mission. However, this dividend can only be leveraged through investments in quality education and employability. The National Education Policy 2020 has also emphasized digital learning, foundational literacy, and vocational skills.

The focus here is threefold – improving access, boosting quality and make learning personalized.

CMAs here can collaborate with institutions to impart financial literacy, cost awareness and entrepreneurship skills to students — preparing them for the demands of Industry 4.0.

A TRULY INCLUSIVE BHARAT: EMPOWERING YOUTH, WOMEN, AND MARGINALIZED COMMUNITIES

We must understand that empowerment is not only about access but about building capabilities. CMAs, with their focus on resource optimization and transparency, can support social sector projects aimed at financial inclusion and livelihood generation.

Inefficient fund utilization and leakages remain among the most significant challenges that undermine the impact of any policy or initiative. For the success of national initiatives at scale, the role of CMAs both as an enabler and as a watchdog becomes more critical than ever. CMAs can actually ensure fund utilization is monitored, outputs are tracked, and leakages are minimized. CMAs can also assist NGOs and self-help groups in cost control, fundraising, and impact evaluation, making social entrepreneurship more scalable and efficient.

INDIA ON THE GLOBAL STAGE

India's G20 presidency and rising influence in global trade underscore the need for businesses to be globally competitive. India is drawing further attention as a global business hub and trade powerhouse in the light of recent geopolitical events. It is being estimated that India could gain significantly from the expected trade-flow shifts by 2030.

As India aims to reach \$2 trillion in exports by 2030, CMAs play a role in strategic sourcing, global supply chain costing, and regulatory analysis. CMAs can lead the Indian companies in managing cross-border compliance, transfer pricing and international cost benchmarking. Our CMAs are already working with global consulting firms, MNCs and international financial institutions, serving as ambassadors of Indian financial expertise. This global exposure can further be leveraged to bring back the best practises and ensure that the Indian firms have the best of both worlds when it comes to international compliances, sourcing and costing.

SUMMING UP

The groundwork for a Viksit Bharat has been set by the GOI through clear guidelines and policy initiatives. Now it falls upon the citizens to take it to the finish line. To fully harness the potential of CMAs in nation-building, there should be enhanced structured collaboration between the CMA fraternity, government bodies, academia, and industry. CMAs should be part of policy think tanks, fiscal reform groups and sustainability boards.

Our institute has the unique opportunity as well as special onus to shape THE curricula, drive continuous professional development and advocate for



Role of CMAs in Viksit Bharat 2047

greater inclusion of CMAs in decision-making roles across sectors.

CMAs, with their rich experience and deep understanding of cost behaviour, value chains, and performance metrics, become indispensable to this mission. The journey to a Viksit Bharat will be marked not only by economic milestones, but with the resilience of institutions and individuals who will drive this growth. CMAs ought to foster a mindset that adopts continuous improvement and makes winning a regular habit.

CMAs: THE STRATEGIC PARTNERS TOWARDS VIKSIT BHARAT



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INTRODUCTION

Viksiti Bharat 2047 represents India's visionary roadmap to transform itself into a fully developed, inclusive and globally competitive nation by its centenary of independence. Anchored in the principles of *Sabka Saath, Sabka Vikas, Sabka Vishwas, Sabka Prayas*, the vision is guided by two overarching objectives: first, to bridge the developmental divide with peer nations that have advanced significantly since the 1960s–70s; and second, to ensure equitable opportunities for every Indian, enabling progress through individual potential and initiative.

At its essence, *Viksiti Bharat 2047* is a multi-dimensional blueprint encompassing economic growth, social inclusion, environmental stewardship, institutional strength and digital transformation. It places special emphasis on inclusive growth for the *garib (poor)*, *mahilayen (women)*, *yuva (youth)*, and *annadata (farmers)*, recognizing them as primary agents of progress. Infrastructure development under the *PM Gati Shakti* master plan aims to deliver high-efficiency logistics and multi-modal connectivity by 2047, ensuring every urban and rural region has access to world-class utilities viz power, water, sanitation, transport and digital infrastructure.

In manufacturing, *Make in India* and various production linked incentive schemes (PLI) are the pillars of Viksit Bharat 2047. The target is to increase its share in GDP from 17 to 25 per cent, by reduced import dependency and deepened global value chain integration. Infrastructure development also supports a country's economic growth and quality of life. Where missions like *Bharatmala Prayojna* and smart city mission focussing on infra and utility banked country's capacity related to logistics cost control, *Sagarmala* project aiming on port modernisation and port led industrialisation resulting in lower shipping and logistics costs, improving India's global trade competitiveness whereas projects.

A robust ecosystem of quality and cost competitiveness is envisioned, supported by enhanced standards, certifications and skill development. India aspires to rank among the top five global exporters in services and



high-value manufacturing, supported by reformed supply chains, trade facilitation and FTAs.

Digital governance initiatives, such as *E-Kautilya*, Open Network for Digital Commerce (ONDC), combined with AI, sustainability practices and skilling programs, will enable the creation of a high-quality, innovation-led economy. Through integrated logistics, efficient production and policy transparency, India aims to emerge not only as the world's third-largest economy but also as a model for value-driven and sustainable development.

ROLE OF COST AND MANAGEMENT ACCOUNTANTS

Cost and Management Accountants (CMAs) are uniquely positioned to support this transformation by enhancing economic efficiency, financial discipline and institutional accountability. Their core competencies lie in optimizing cost structures, improving productivity and driving performance across entire value chains. CMAs develop cost accounting systems, conduct performance audits and apply advanced methodologies like activity-based costing (ABC) and life-cycle costing to enhance the effectiveness of infrastructure projects, logistics systems and public service delivery.

There are more than 100,000 CMAs supporting the national objective by contributing to strategic decision-making, cost optimization and enhancing financial efficiency across various sectors.

To increase the manufacturing sector's share in GDP, CMAs facilitate strategic pricing, perform break-even and CVP analysis and implement lean cost models to boost productivity. They play an essential role in strengthening MSMEs and startups by advising on financial planning, working capital management and cost control, crucial elements for job creation and local economic development.

As contributors to good governance and public financial management, CMAs are engaged in outcome-based budgeting, fiscal transparency initiatives and indirect tax optimization through tools like GST impact assessments. They assist the policy makers in designing performance monitoring frameworks for government programs and PPPs and ensure robust internal controls, cost audits and risk-based oversight in public enterprises.

CMAs also play a vital role in India's green transition. They establish frameworks for green costing, carbon accounting and ESG compliance helping businesses and government entities to meet BRSR norms and incorporate sustainability metrics in budgeting, reporting and strategic planning.

In a progressively digital economy, CMAs are becoming architects of AI-integrated financial governance. They develop automated costing models, digital audit trails and compliance tools. CMAs are at the forefront of integrating financial analytics into platforms such as *e-Kautilya*, while

also advancing digital financial literacy, especially among rural enterprises and micro medium and small entities (MSMEs).

To support India's goal of global export leadership, CMAs enhance competitiveness by implementing standard costing systems, driving cost rationalization across value chains and conducting import substitution analysis. Their efforts enable Indian industries to meet global benchmarks in cost, quality and sustainability.

At the grassroot level, CMAs are enabling inclusive economic growth by mentoring MSMEs, Farmer Produce organisations (FPOs), Self Help Groups (SHGs) and rural startups. Their sector-specific expertise strengthens cluster-based development and enhances the financial viability of local enterprises.

CMAs are instrumental in developing a financially literate and skilled workforce, one of the foundational pillars of *Viksit Bharat*. Through certification programs in cost management, GST, forensic accounting and digital finance and other Institute led initiatives such as the National Youth Commerce Olympiad (NYCO), CMAs are preparing India's youth to thrive in a knowledge-driven, future-ready economy.

ROLE OF GAIL (INDIA) LTD. IN THE VISION OF VIKSIT BHARAT 2047

Public Sector Undertakings (PSUs) have historically played a defining role in shaping India's economic and strategic architecture. In the journey towards *Viksit Bharat 2047*, their significance is amplified. GAIL (India) Limited stands out as a cornerstone of India's energy resilience and sustainable development agenda.

During FY 2023–24, India's 272 operating Central Public Sector Enterprises (CPSEs) reported a remarkable 47 per cent surge in net profits, totalling ₹3.22 lakh crore, recording 47 per cent jump in net profit. These enterprises generated ₹36.08 lakh crore in gross revenue and contributed ₹4.85 lakh crore to the Central Exchequer, reflecting their pivotal role in the nation's economic framework.

Ensuring affordable and reliable energy for all is vital to any development agenda. India is the third-largest energy consumer globally and over 85 per cent of its crude oil and 50 per cent of its Natural Gas is imported.

India's strategic shift towards a gas-based economy aiming to raise natural gas's share in the energy mix from 6 to 15 per cent by 2030 is powered by exponential growth in City Gas Distribution (CGD), LNG infrastructure and development of cross-country pipeline networks, enabling cleaner, more efficient energy access across industries, transport, and households. These goals align with India's climate commitments (e.g. COP26 *Panchamrit*



pledges for net-zero by 2070), making gas and cleaner fuels a national priority. As India's leading integrated natural gas company, leading the charge in innovation, GAIL (India) Ltd is advancing green hydrogen plants and spearheading expansive pipeline projects of national importance. The Petroleum and Natural Gas Regulatory Board (PNGRB) has facilitated this transformation by authorizing over 33,500 km of pipelines and 307 CGD networks, laying the foundation for future-ready energy delivery

Leading the charge in innovation, GAIL operates across a wide-ranging energy portfolio that includes natural gas transmission and marketing, petrochemicals, City Gas Distribution (CGD), liquefied natural gas (LNG), participation in exploration and production activities, as well as ventures into renewables, hydrogen, bio-energy and other emerging clean fuels. Its over 16,800 km cross-country pipeline completed network and ~3000 Kms under construction connects 22+ States, enabling affordable, cleaner energy access for industries and households alike.

GAIL (India) Limited along with its joint ventures, subsidiaries and associates has significantly expanded its natural gas pipeline network by extending it to the eastern and North Eastern parts of the country and joining the Seven Sisters into National Gas Grid, a region that had previously remained untouched by this critical infrastructure. This strategic expansion not only ensures a more balanced regional development but also supports the Government's vision of a gas-based economy. By bringing cleaner energy to new areas, GAIL is enabling industrial growth, attracting investment, and fostering inclusive economic progress across the Eastern States.

GAIL's strong financial performance highlighted by a net profit of ₹11,312 crore in FY 25 and its consistent dividend contributions to the exchequer, affirm its dual mandate of commercial excellence and nation-building.

Through the expansion of CGD networks in Tier 2 and Tier 3 cities and the facilitation of "One Nation, One Gas Grid," GAIL is bridging energy access gaps and supporting equitable industrial development across India.

Aligned with India's COP26, COP28, and Net Zero 2070 commitments, GAIL is proactively investing in clean energy. With a current renewable energy capacity of over 145 MW, and a target of 1.7 GW by 2030, GAIL is supporting grid decentralization and reducing emissions through solar, wind, and hybrid projects. In the bio-energy space, its CBG initiatives under the SATAT scheme are enabling waste-to-energy conversion, rural income generation, and energy diversification.

GAIL is also advancing India's hydrogen economy through the commissioning of a 10 MW PEM electrolyzer at Vijaipur, Madhya Pradesh—one of the country's first green hydrogen plants. GAIL has collaborated with eminent research institutions to successfully achieve a 5 per cent hydrogen blending

by volume with natural gas in pipelines. Through pilot blending projects and hydrogen mobility plans, GAIL is laying the groundwork for a future-ready, decarbonized energy landscape.

Behind GAIL's visible infrastructure and strategic expansion lies the vital contribution of more than 120 Cost and Management Accountants. CMAs at GAIL are instrumental in driving resource efficiency, capital planning, and ESG-linked project evaluations. Through life cycle costing, carbon cost analysis, transfer pricing models and data-driven forecasting, they help GAIL manage long-gestation, high-capex green investments prudently and sustainably.

Their role spans investment appraisals, internal financial controls, sustainability-linked budgeting and disclosure alignment—ensuring GAIL's operations to remain both strategically aligned with national objectives and financially sound.

CMAs are also playing a vital role in shaping GAIL's financial response to policy shifts, market volatility, and technological disruption enabling the company to remain agile, competitive and policy-responsive. As India stood on the global stage at COP26 and pledged its *Panchamrit* goals including 50 per cent renewable energy by 2030 and net-zero emissions by 2070, it signalled not just an ambition, but a turning point and to support this, regulations now require businesses to report their Environmental, Social and Governance (ESG) efforts

CMAs help companies turn these commitments into practical financial strategies. CMAs can measure the costs of emissions, resource use and pollution control to guide smart investments in green projects. In addition, CMA can also calculate the financial impact of reducing carbon emissions and set up internal pricing systems for carbon use to ensure sustainability makes economic sense.

To further strengthen their role, the Institute of Cost Accountants of India (ICMAI) has introduced two Sustainability Standards—ISS 1 and ISS 2. These Standards help businesses plan sustainability budgets, track ESG performance and report progress in a structured way. CMAs also assist companies in following global frameworks like Global reporting initiative (GRI), Task force on Climate-related Financial Disclosure (TCFD) and International Sustainability Standards Board (ISSB) while supporting green financing with credible data.

CONCLUSION

As India approaches its centenary, the vision of Viksit Bharat 2047 calls for institutions that harmonize growth with responsibility and innovation with



inclusion. In this transformative journey, CMAs emerge as vital strategic partners, embodying financial prudence, integrity, and professional excellence. In organizations like GAIL, CMAs play a crucial role in ensuring that every rupee spent is not just an expense but an investment towards a self-reliant, sustainable and developed India. Their expertise in cost management, financial analysis, governance and strategic planning enables effective resource utilization across diverse sectors from energy projects and manufacturing operations to infrastructure megaprojects and public budgeting.

CMAs are the architects of financial transparency and efficiency, embedding data-driven decision-making and cost-conscious practices that maximize public value and drive long-term sustainability. As India builds a cleaner, resilient energy future, CMAs guide the energy sector towards cost efficiency, accountability and value creation, strengthening the foundation for Viksit Bharat.

Ultimately, the realization of Viksit Bharat 2047 hinges on integrity, efficiency, and accountability. CMAs, as guardians of these principles, will catalyze India's transformation by turning visionary policies into measurable progress. Through their strategic financial stewardship, they empower a self-reliant, equitable, and economically robust India championing the financial architecture that will sustain the nation's growth and prosperity well beyond 2047.

SOURCES

1. *PIB Survey report FY 2023-24*
2. *The Economic times*
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CMAs AS CATALYST TO DRIVE ECONOMIC & BUSINESS GROWTH



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Viksit Bharat is not just an aspiration but it's a shared national mission. It's about transforming India into a developed nation by 2047 through indigenous talent in all the fields of economy. It will be possible by encompassing various facets of development, social, economic, industrial, environmental and among all fronts.

This goal will be led by professionals from all fields whether it is accounting, medical, IT sector, service industry, manufacturing, policy makers, public or private. It's not possible to restrict up to any specific sector or industry or society.

JOURNEY OF DEVELOPING TO DEVELOPED

It never happens through doing big things rather than doing small, small things in the right way.

By making things easier for end users and by creating awareness about innovation, technology, process and compliances management among citizens and professionals.

ROLE OF CMAs IN VARIOUS FIELDS

The CMA's role can be broad and varied. CMAs are key financial strategists in many industries. Their expertise in budgeting, forecasting and decision analysis allows them to significantly impact businesses.

The role of CMA is not only restricted to financial reporting, but they are also responsible for strategic insights, managing financial complexities and guiding structured decision-making processes.

Apart from this they always provide future insights into financial planning. It is not just a profession but rather its passion to build a nation. This is considered as one of topmost finance qualification in India along with CAs.

While Chartered Accountants are focused primarily upon compliances, audit and taxation



CMAs' core focus is always on decision making skills to help all stakeholders in taking right decisions for growth of the economy / business and hence growth of nation apart from regular audit and compliance work.

TECHNOLOGICAL ADVANCEMENT, INNOVATIONS & START-UPS

In today's rapidly evolving technological landscape, the role of Cost and Management Accountants has become increasingly vital. These professionals not only manage costs but also play a pivotal role in driving technological advancements within organizations. Their expertise in both finance and technology allows them to bridge the gap between the two fields, ensuring that technological investments are both financially feasible and strategically sound.

The entire nation is moving towards digital transformation. This transformation is not restricted only to financial transactions, it is also applicable for key business decisions through integration of financial information through AI and conversion of data into critical information through business intelligence (BI).

By leveraging smart analytics tools CMAs will be in a much better position to provide key inputs about business indices which are key growth drivers to monitor on day-to-day basis, which are levers which can be helpful for margin improvement plans.

CMAs know very well how to embrace change. With newest technologies in place now, the role of CMAs is evolving as strategic partners who are equipped with data analytics to provide key insights about taxation, accounting, business growth, potential market / Industry to enter.

They are capable of providing solutions based upon key insights through multiple levels of data analytics, along with providing scenarios based on market conditions.

Today's technological changes are attracting young professionals to use AI / machine learning.

Contribution of AI in significant ways to management accounting profession are: -

- Automation of routine tasks
- Data analytics and pattern analysis
- Cost optimization through benchmarking
- Predictive analysis
- Risk management
- Enhanced decision support
- Personalized reporting

CMAs perform some of the most complex work for accounting including management accounting. The type of detailing they do always help organizations in maintaining financial stability along with being competitive in the market with compliance with process and policies on all fronts. It's a solemn responsibility which becomes more critical and gives a much better outcome with the latest technological advancements.

By leveraging AI and automation, CMAs can hand over time consuming tasks to machines for key data crunching work and they can focus their energy in transforming themselves into strategic players.

The role of CMAs is highly critical in working closely with the Business & IT teams and providing exact requirement to the IT team to find such solutions; in fact now a days most of the companies are appointing CMAs as heads of IT department just to ensure that the person should be in a position to understand exactly what is required so that the solution can be designed.

As technology continues to advance, businesses are increasingly reliant on innovative solutions to stay competitive. This creates a demand for Cost and Management Accountants who can navigate the complexities of technological investments. They play a crucial role in assessing the financial viability of new technologies, helping organizations make informed decisions about where to allocate their resources.

Cost and Management Accountants are integral in evaluating potential technological investments. They assess the cost-benefit analysis of new technologies, considering factors such as *initial costs*, *long-term savings*, and *potential returns on investment*. By providing a clear financial perspective, they help organizations prioritize projects that offer the greatest value.

As technology continues to evolve, the role of Cost and Management Accountants will become even more critical. They will need to stay abreast of the latest technological trends and continuously update their skills to remain effective. By embracing innovation and leveraging their financial expertise they will play a key role in shaping the future of business.

To summarize, CMAs play a crucial role harnessing financial information with the help of AI to drive business and economy at all levels. Their expertise in both finance and technology enables them to help organizations realize the full potential in terms of investment evaluation, cost control, driving innovation and ensure compliance. Further as technology continues to evolve, CMAs will be essential in helping organizations navigate the complexities of digital age and achieve sustainable growth with the help of AI.

ECONOMIC GROWTH & PROSPERITY – MSMEs

India has almost 40 million micro, small and medium enterprises (MSMEs) and



this sector is emerging as highly dynamic sector of the Indian economy. This sector plays a significant role in the growth of the economy and contributes to approximately 30 per cent of the total economy. The Government is taking several initiatives to boost this sector and that is the reason why maximum number of new registrations are happening here which is leading to a greater employment generation leading towards growth of the economy.

Few benefits available to MSMEs: -

- Collateral free loans at lowest interest rates
- Range of Government subsidies
- Procurement preferences
- Tax & compliance benefits
- Skill development and training program
- Protection against delayed payments

Cost and Management Accounting is an essential tool for businesses, particularly micro, small, and medium enterprises (MSMEs), in navigating the complex economic landscape. It plays a pivotal role in optimizing resources, enhancing efficiency, and driving economic growth and prosperity. This article explores the significance of Cost and Management Accounting in the sustainability and advancement of MSMEs.

Most MSMEs are usually single handed, promoter business driven where the decision making is central. In such cases most decisions come from a single person at the top management.

Here the role of CMAs / professionals is to educate the promoters about all aspects of opportunity loss / potential opportunity area through his / her managerial experience and expertise.

Since most MSMEs are startups in nature, it is important to set the process at right places from beginning and focus required on small daily operational activities like

- Resource optimization – to improve efficiency and hence better margins
- Preliminary budgeting process preferably zero-based budget for revenue / cost
- Informed decision support system – about pricing, material mix and investment for better financial planning and ensures resources are properly deployed to have best in class productivity.
- Competitive advantage – helps in margin improvement through low cost, right product mix, driving market share.
- Designing pricing policies to be competitive in the market

- Operational MIS (daily / weekly / monthly) to have quick business decisions
- Risk management – Identify potential hidden risks and possible timely solutions to mitigate them.

Overall, the Indian MSME sector provide ample opportunities to CMAs to thrive and make a significant impact by contributing to the financial health and success of these enterprises.

The role of CMAs is dual in such cases: - first to protect the interest of Government to ensure that none of these policies are misused and on other hand to ensure that the enterprise is able to encash all the benefits within the guidelines set by Government for growth of organizations.

Cost and Management Accounting is a powerful tool that can drive the growth and prosperity of MSMEs. It plays a crucial role in enhancing the financial health of these enterprises. Moreover, its positive impact on job creation, innovation and economic balance underscores its importance in the broader economic context. Despite the challenges, with the right strategies and tools, MSMEs can successfully implement cost management and reap numerous benefits

MODERN & RESILIENT INFRASTRUCTURE

In an era where infrastructure development is pivotal to the economic growth and societal welfare, the role of a Cost and Management Accountant has become increasingly significant. As modern and resilient infrastructure initiatives take the center stage, Cost and Management Accountants are essential in ensuring that these projects are economically viable, financially efficient and sustainable.

India being the 5th largest economy of the world at present, has already made remarkable progress in modern infrastructure development over the past decade. Infrastructure plays a crucial role in supporting businesses and driving economic growth. It facilitates the movement of goods, people, and information, enabling smoother operations and increased productivity for businesses. Investing in infrastructure always creates jobs, stimulates economic activity, and improves the overall quality of life.

Modern infrastructure refers to advanced and innovative engineering, construction and technology integration used in developing facilities and services. This includes smart cities, high-speed rail networks, renewable energy projects and advanced telecommunications systems. *Resilient infrastructure*, on the other hand, is designed to withstand and quickly recover from natural disasters, climate change impacts and other potential disruptions.



Achieving and preserving economic development always requires significant investment in modern and resilient infrastructure systems, so that they should be in position to withstand long term expectations at par with new technology shocks and effectively deal with severe weather events such as floods, droughts and extreme temperatures.

Emphasizing resilient infrastructure is particularly timely as billions will be invested in the coming years to decarbonize economies, build new housing for growing populations, and bridge the development gaps.

Building resilience into infrastructure systems is estimated to add just 3 per cent to the total investment cost, a fraction that can be easily be recouped with the benefits they provide during the lifetime of an infrastructure asset.

The role of CMAs extends to a range of activities to advance resilient infrastructure. Some of them can be as under :

- Help organizations in the adoption of global standards and approaches, like planning, management and financing processes.
- Make sure about involvement in construction activity to have right mix and usage of raw material including equipment purchase keeping in view the short term / long term requirements along with market requirement.
- Make risk-informed decisions on each investment because most of the investments once made become sink cost (if not used properly).
- Allocating sufficient budgetary resources to disaster risk reduction measures.
- Identifying a pipeline of resilient infrastructure projects.
- Financial forecasting
- Resource utilization

The role of CMAs in modern and resilient infrastructure is indispensable. Their expertise in cost analysis, budgeting, financial reporting and risk management ensures that infrastructure projects are financially efficient and sustainable. As the demand for advanced and resilient infrastructure continues to grow, the importance of Cost and Management Accountants in driving these initiatives to successful completion cannot be overstated. Their contribution is pivotal in building a resilient future that is economically viable and sustainable.

ENVIRONMENTAL SUSTAINABILITY

In the current modern age, environmental sustainability is no longer a choice but a necessity and hence the role of CMAs has evolved significantly. Traditionally seen as financial stewards, these professionals now play a pivotal role in guiding businesses towards sustainable practices that balance

profitability with environmental responsibility.

Environmental sustainability refers to the responsible management of resources to ensure that the needs of the present are met without compromising the ability of future generations to meet their own needs. It encompasses various aspects such as reducing carbon footprints, managing waste, conserving water and promoting renewable energy.

The expertise of CMAs in financial analysis, budgeting and cost control provides them with the tools to influence strategic decisions that impact the environment sustainability in organizations.

Identifying and measuring environmental cost including cost rationalization: By quantifying costs on waste disposal, energy consumption, water usage and emissions accountants provide a clear picture of the environmental impact of business operations. Once they are measured the CMAs work closely with business to rationalize these costs also without compromising business objectives.

Integrating Environmental costs into financial reporting: This involves incorporating environmental metrics into annual reports and sustainability reports. Transparent reporting on environmental performance helps stakeholders to understand the company's commitment to sustainability and can enhance the organization's reputation.

Supporting sustainable decision making: - Through accurate and relevant cost information, CMAs support sustainable decision-making. They help the management to evaluate the financial implications of various sustainability initiatives such as investing in renewable energy, implementing waste reduction programs, or adopting eco-friendly materials. This ensures that sustainable choices are also economically viable.

Cost Benefit Analysis: Cost-benefit analyses of environmental initiatives include costs of implementing sustainable practices with the potential benefits, such as cost savings, increased efficiency and improved brand value. These analyses are crucial for making informed decisions as to which initiatives need to be pursued.

Compliance and Risk Management: Environmental regulations are becoming increasingly stringent, and non-compliance can result in significant monetary penalties and reputational damage. As mentioned earlier CMAs play a key role in ensuring that the organizations comply with environmental laws and regulations. They also assess and manage risks associated with environmental issues, such as potential liabilities and the impact of climate change on business.

Stakeholders' engagement: CMAs make constant effort to educate and engage stakeholders on the importance of environmental sustainability



which includes regular training on sustainable practices, communicating with investors about the company's environmental performance and collaborating with suppliers to promote sustainability throughout the supply chain.

To summarize, the role of the CMAs in environmental sustainability is multifaceted and crucial. By identifying and measuring environmental costs, integrating these costs into financial reporting, supporting sustainable decision-making and monitoring progress, Cost and Management Accountants help organizations achieve their sustainability goals. Through their efforts they ensure that businesses can thrive economically while protecting the planet for future generations.

AGRICULTURAL INNOVATION

Agriculture has long been the backbone of most economies worldwide. In recent years, however, the sector has faced multifaceted challenges—climate change, resource scarcity, market volatility and the urgent need for sustainability.

CMAs, with their expertise in financial planning, cost control and performance analysis, can significantly contribute to making agriculture more efficient, sustainable and innovative through the following measures:

1. Enhancing Cost Efficiency and Profitability

Agriculture involves a variety of input seeds, fertilizers, pesticides, water, labor, machinery, and more. Many farmers, especially smallholders, struggle with managing these input costs effectively, often leading to reduced profitability.

2. Supporting Financial Planning and Budgeting

CMAs play a crucial role in financial planning by preparing detailed budgets for innovative agricultural projects. They help agri-businesses forecast expenses, estimate returns and allocate resources efficiently. This foresight is essential for the scalability and sustainability of innovation. (For instance a CMA can perform cost benefit analysis as to how solar power irrigation will be helpful with payback period, cost saving , differentiation from others)

3. Facilitating Access to Finance and Investment

CMAs act as a bridge between innovators and financial world through expertise in

- Business plans
- Project feasibility reports
- Loan applications
- Financial projections

Their involvement increases transparency and boosts the confidence of lenders and investors, making it easier for agri-innovators to secure funding for their ventures

Access to finance is a major hurdle for many in the agricultural sector. Banks, investors, and Government grant agencies often require detailed financial reports and feasibility studies before committing funds.

4. Promoting Sustainability and ESG Compliance

Sustainability is no longer optional in modern agriculture. Consumers and regulators are increasingly demanding that agricultural products meet Environmental, Social, and Governance (ESG) standards.

CMAs help to implement sustainability accounting practices by measuring and reporting on:

- Carbon footprint
- Water and energy usage
- Waste management
- Biodiversity impact

5. Driving Innovation Through Performance Management

Innovation is not just about adopting new tools but it is also about continuously improving the performance. CMAs specialize in performance measurement and benchmarking, which allows agricultural enterprises to assess the effectiveness of new techniques.

By using tools like Activity-Based Costing (ABC), Balanced Scorecard, and Key Performance Indicators (KPIs), CMAs help farmers and agribusinesses track, define and monitor in better ways the following:

- Yield per acre
- Input-to-output ratios
- Labor productivity
- Return on investment from innovation.

6. Risk Management in Agriculture

Agriculture is inherently risky. Weather unpredictability, pests, price volatility and changing regulations all pose financial threats. CMAs use risk analysis tools to model different scenarios and prepare mitigation strategies.

CMAs may assess the financial implications of switching to drought-resistant crops or analyze the risks and benefits of entering a new export market. They also assist in:

- Crop insurance modeling
- Hedging strategies for commodity prices



- Financial contingency planning

By managing risk more effectively, farmers can adopt innovations with greater confidence.

7. **Supporting Government and Policy Implementation**

Governments frequently introduce schemes and policies to encourage innovation in agriculture—be it through subsidies for solar pumps, grants for organic farming, or incentives for water conservation.

CMAs can assist both public institutions and beneficiaries in:

- *Policy planning*: Offering cost-benefit insights into proposed agricultural policies.
- *Scheme implementation*: Tracking how funds are utilized and measuring the impact.
- *Audit and compliance*: Ensuring that resources are used efficiently and transparently.

Their involvement ensures that public funds provided for promoting innovation yield real outcomes.

8. **Training & Advisory Roles**

Agricultural innovation isn't just about new technology, it also involves changing mindsets. Many farmers are hesitant to adopt new practices due to a lack of understanding of the financial implications.

CMAs can serve as educators and advisors, training farmers in basic accounting, cost control, and financial planning. This financial literacy empowers farmers to make better decisions and embrace innovation more readily.

To summarize, the role of CMAs in agricultural innovation is both strategic and transformative. Their expertise goes beyond traditional accounting—they act as financial architects, strategic advisors, and innovation enablers in the rapidly evolving agricultural landscape.

By helping to optimize costs, secure funding, manage risks, and ensure sustainability, CMAs bridge the gap between innovative ideas and practical, profitable implementation. As agriculture continues to face global challenges, the integration of financial intelligence through CMAs will be essential in making the sector more resilient, modern, and future-ready.

EMPOWERMENT OF YOUTH, WOMEN & MARGINALIZED COMMUNITIES

True economic growth is measured not by wealth at the top, but by opportunities created for those at the bottom.



When Cost and Management Accountants empower minds, they don't just balance books they balance societies.

The true measure of development is how it reaches the last person and CMAs are bridges to that future.

Empowering youth, uplifting women, transforming communities — CMAs are architects of an inclusive India.

CMAs are key drivers of financial discipline, operational efficiency, and strategic growth in any economy. In India's quest for inclusive and sustainable development, CMAs have a significant role to play in empowering youth, women, and marginalized communities. By leveraging their expertise in cost management, financial planning, and strategic advisory, CMAs contribute to building capacities, improving financial literacy, and fostering entrepreneurship among disadvantaged groups, thereby promoting economic participation and social equity.

Role of CMAs in Empowering Youth

1. *Skill Development and capacity building*

- Training programs, workshops and educational initiatives focused on enhancing financial, analytical, and management skills among youth.
- They support Government initiatives like **Skill India** by designing and delivering specialized courses that prepare young people for the demands of modern industries.

2. *Career guidance and mentorship*

- CMAs offer guidance to students about career options in finance, costing, management and entrepreneurship.
- Informed career decisions aligned with market need through seminars, webinars, and campus engagement.
- CMAs working at prestigious positions at public / private corporates are able to guide the younger generation about opportunities available where their roles extend to the entire gamut of finance and accounts incl financial planning.

3. *Entrepreneurship promotion*

- CMAs mentor young entrepreneurs in setting up businesses by assisting in business planning, cost control, budgeting, tax compliance, and funding strategies.
- Help startups achieve financial and operational efficiency, increasing chances of long-term success.



Role of CMAs in Empowering Women

1. Financial Literacy and Economic Empowerment

- CMAs conduct workshops and community programs to educate women about savings, investments, insurance, taxation, and credit management.
- Financially literate women are better equipped to manage businesses, households, and contribute to national economic growth.

2. Support to Women Entrepreneurs

- CMAs assist women-led enterprises by providing consultancy on cost management, profit planning, taxation and other statutory compliances and scaling strategies.
- They enable access to formal financing channels and government schemes specifically targeted at women entrepreneurs, such as Stand-up India.

3. Capacity Building through Professional Opportunities

- Encouraging more women to pursue CMA as a profession empowers them to access high-quality career opportunities in fields like finance, corporate governance, and management.

ROLE OF CMAS IN EMPOWERING MARGINALIZED COMMUNITIES

1. Promoting Financial Inclusion

- CMAs bridge the gap between marginalized communities and the formal financial sector by educating them about banking services, microfinance, government subsidies, and digital payment systems.

2. Support to Rural and Micro Enterprises

- Many marginalized individuals run micro or small enterprises without formal cost accounting or financial systems. CMAs assist these enterprises by:
 - ▲ Setting up simple bookkeeping systems.
 - ▲ Providing cost analysis to improve profitability.
 - ▲ Helping secure loans or government grants.

3. Social Auditing and Community Empowerment

- CMAs act as social auditors for welfare programs, ensuring transparency and that resources actually reach intended beneficiaries.
- They advocate for better program design based on audit findings, improving the efficiency of poverty alleviation and welfare initiatives.



Some of Initiatives like the following are already in place:

- *ICMAI Financial Literacy Campaigns*: Nationwide drives focusing on rural youth, women and marginalized groups.
- *Skill Development Collaborations*: CMA Chapters partner with NGOs and Government bodies to offer free or subsidized financial education and entrepreneurship training.
- *Mentorship Programs*: CMA professionals volunteer to mentor students and budding entrepreneurs from underprivileged backgrounds.

To summarize CMAs are not only finance professionals but also agents of social change. Through financial empowerment, entrepreneurial support, education, and social auditing, CMAs are actively contributing to the vision of a more equitable, inclusive, and prosperous India. Their engagement with youth, women, and marginalized communities ensures that India's growth story is both sustainable and inclusive, leaving no one behind.

GLOBAL LEADERSHIP

With an expansive skill set that encompasses financial acumen, strategic thinking and leadership capabilities, Cost and Management Accountants are essential to organizational success on a global scale.

CMAs play a crucial role in global leadership by equipping themselves with the skills to manage finances and make informed decisions in a global context by providing financial expertise and insights that are essential for navigating the complexities of international business. They help organizations align their financial strategies with global market trends and ensure effective financial planning across borders.

Global leadership is the art of managing an international community. It includes understanding diverse people's behaviors, attitudes, and thoughts to promote synergetic work. It applies skills such as flexibility and independence to be able to achieve objectives in a global context by establishing co-relation between financial as well as non-financial indices together for any industry / economy.

Effective global leadership requires strategic thinking, cross-cultural communication and adaptability to navigate diverse international markets.

CMAs have all the above requirements through

Financial Stewardship

- Cost control & rationalization:- Applicable everywhere
- Budgeting & forecasting – Key to success



Strategic Decision Making

- Data Driven Insights: It is explained in the earlier part of this article and is a blend of expertise wrapped with latest technology.
- Risk management along with possible mitigation plan

Enhancing Operational Efficiency

- Process Optimization through detailed insight of financial and non-financial indices.
- Performance measurement

Leadership and collaboration

- Cross functional leadership
- Ethical Leadership

Whenever we walk into any boardroom, office or startup, we can immediately identify who the leader is.

Leadership isn't about a title; it's about influence. And whenever anyone develops the ability to influence others, it seems to be considered as a right tracker to be an effective leader.

In all facets of personal and professional life, leadership skills are respected and admired. Luckily, leadership skills are also transferable. If we can develop leadership skills in any one area of our life, we will be able to apply them to other areas as well.

CMA professionals who often land in roles like CFO or Corporate Controller exercise leadership skills to communicate effectively, relate to others, and motivate teams to crush goals.

Leaders in every organization have an immense responsibility for their team members. As a leader, they guide the direction of a company and every individual who's in it.

Big responsibility. But also, game-changing... if they do it right.

With all the above, role of CMAs in global leadership is both dynamic and integral. Their contributions extend beyond traditional accounting functions, positioning them as key players in the pursuit of global organizational success. As businesses continue to navigate the complexities of the global market, the value of CMAs will only grow, underscoring their essential role in shaping the future of global leadership.

VIKSIT BHARAT 2047: A \$30 TRILLION VISION FOR A DEVELOPED INDIA



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1. PRELUDE

I was fortunate to be born in Independent India. But when I read the stories of our freedom fighters it fills me with lots of emotions to see their sacrifice. I salute them as they could be bounded physically but mentally, they were always free to make India a country of their dreams. The plan for Viksit Bharat 2047 is an extension of their dreams and intertwined with the basic fabric of the country which we call Bharat

India stands on the threshold of an unprecedented transformation. By 2047, a century after gaining independence, India envisions itself as a developed nation with a \$30 trillion economy where every person is guaranteed of basic living standards to dream freely and achieve that dream without undue obstacles.

But what does a “developed India” truly look like?

It’s more than just economic indicators—it’s about holistic well-being, technological excellence, inclusive growth and global leadership rooted in cultural wisdom where the mind is without fear and the head is held high.

This article outlines the five transformative springboards that will launch India toward this future.

2. SPIRITUALITY: INDIA’S INNATE USP

India’s ancient roots in spirituality can provide a profound foundation for national growth.

India’s USP: India is globally recognized for its spiritual legacy—yoga, meditation, Ayurveda, Vedanta, and philosophical wisdom. These are not just practices but India’s unique soft power exports. Only the physically, emotionally and spiritually healthy people can make a really developed nation ready for the future.

Happiness Quotient: Spiritual grounding nurtures inner happiness and mental well-being. A developed India must prioritize gross national happiness



alongside gross domestic product (GDP), creating a society where peace of mind is seen as success. We must focus on more smiles per person.

Direction and Purpose: Spirituality provides a compass for ethical governance, responsible capitalism and inclusive growth. It gives development meaning—beyond materialism.

Scientific Temperament in Religion: As we embrace spiritual growth, it is vital to cleanse society of harmful superstitions and foster a rational, scientific outlook toward God and religion. True spirituality must evolve with scientific understanding, leading to empowerment rather than blind faith.

Mental, Emotional, Spiritual and Universal Intelligence: Incorporating spiritual education into schools can cultivate character, resilience and empathy—skills crucial for future leadership.

Infographic: India's Spiritual Exports And Global Reach

- Yoga: 300 million practitioners globally
- Ayurveda: \$10 billion global industry
- Meditation apps & retreats: Growing at 20 per cent annually
- Spiritual tourism: 100 million+ visitors annually

3. TECHNOLOGY AND AI: SCALE WITH SOUL

Technology will be the accelerator, but its deployment must be humane and inclusive.

a) Scale: Technology must touch the lives of every person in the country. India's digital infrastructure supports the world's largest biometric system (Aadhaar), Unified Payments Interface (UPI) and e-governance platforms. Scaling responsibly will ensure efficiency and equity.

b) Helping the Last Person: AI should not just replace jobs but create opportunities—customized learning, rural healthcare and real-time agricultural assistance. AI literacy for all will be key. Artificial intelligence and artificial general intelligence must free people from routine, mundane work to allow people to focus more on their purpose, passion, experiences and quality of life.

c) Automation: Robotics in agriculture, manufacturing, logistics and even domestic work can free up human potential for creativity and care-based professions.

d) Digital Public Infrastructure (DPI): India Stack is a global model. The next generation could include AI-powered public grievance systems, smart law enforcement, and virtual citizen engagement forums.

e) Digital Energy Infrastructure: Smart grids, solar micro-grids, AI-powered



energy management and blockchain-based carbon credit systems will revolutionize India's power sector.

f) Digital Health Infrastructure: AI diagnostics, wearable tech, telemedicine, drone medicine delivery and digital health passports will close rural-urban healthcare gaps.

g) Data Sovereignty and Cybersecurity: As data becomes the new oil, India must lead in ethical data governance, digital rights protection and AI transparency.

AI will free a significant amount of time that is currently spent on routine and repetitive tasks, and this will redefine life - not just work. The focus will shift from survival to self-realization, there will be new definitions of productivity where creativity will take the center stage, where purpose will be central and for this education must evolve and instead to teaching how to earn a living, education should teach how to live – how to create and collaborate.

With more time and tools in hand more people will turn to creating – art, innovation, and local community projects. The idea of job will dissolve into more fluid forms of contribution.

So yes, this AI driven era till 2047 will demand not just policy shifts, but a philosophical reboot of what it means to be human.

Infographic: DPI Milestones and Future Vision

- UPI: \$2 trillion+ annual transactions
- 1 billion+ Aadhaar-linked services
- 500 million+ Jan Dhan bank accounts
- 100,000+ villages connected with optical fibre

4. ENTREPRENEURSHIP: THE ENGINE OF TRANSFORMATION

India's entrepreneurial spirit must be harnessed for inclusive, solution-oriented growth. With the help of AI, bots and humanoids we must evolve from Service and Industry 4.0 to Service and Industry X.0 and beyond.

a) Social Entrepreneurship: Ventures solving for clean water, education, healthcare and sustainable housing are reshaping grassroots India.

b) Mass Entrepreneurship: Empowering millions through skilling, microcredit, and e-commerce access. Everyone can be a job creator.

c) Solution-Based Models: Startups must align with SDGs—climate tech, agritech, edtech, and cleantech. Innovation must solve real problems.

d) Unique Selling Proposition (USP): Indian entrepreneurs must lead with



authenticity—tech for good, tradition with innovation. The “global” mindset is the new frontier.

e) One District One Product (ODOP): Reviving local crafts, cuisine and specialties to create niche global markets. Add value, brand storytelling and design. ODOP must be based on the USPs of the Districts and the USP map of India must be made functional. Research, investment, skills, innovation etc. must be based on the USP of the district and the USPs of all districts must be connected (inputs of one to be the output for other) to unlock value.

f) Open Network for Digital Commerce (ONDC): Democratizing online retail by integrating small retailers into the digital economy. Small players must participate in the digital commerce through ONDC and it will be interesting to see kendu a local fruit of Jharkhand be sold to someone in Delhi with seamless supply chain integration and facilities.

g) Women and Youth Entrepreneurship: Ensuring 50 per cent of startups are led by women or youth under 30 by 2047. The energies of the youth and women power must be channelised constructively to ensure people participate in the overall growth story.

h) Circular Economy Ventures: Turning waste into wealth—biogas, compost, recycled fashion, and e-waste management startups must be encouraged to ensure Indians are creative enough to leave nothing as waste. Government must remove all undue obstacles that create hindrance for entrepreneurship and simplify the entire entrepreneurial ecosystem to attract youth to start on their own rather than look for jobs under others. We must use the demographic dividend constructively.

Infographic: Entrepreneurial Landscape by 2047

- 100,000+ startups
- 50 per cent women-led ventures
- 10 million micro-entrepreneurs supported by ONDC
- 500 unicorns across Tier 2 & 3 cities

5 . LEADERSHIP AND VISION: LEADING THE SELF TO LEAD THE WORLD

India must cultivate visionary leadership rooted in values, wisdom and foresight.

a) Futuristic Infrastructure: Bullet trains, smart cities, hydrogen highways, and green corridors must serve as engines of progress.

b) Lead by Leading the Self: Ethical, self-aware leadership rooted in dharma must define India’s domestic and global image.



c) Global Leadership in Key Sectors:

- **Space:** Chandrayaan, Gaganyaan, lunar bases, asteroid mining. Indians have an advantage in space and they must ensure this advantage is built upon.
- **Agriculture:** AI-powered, organic and export-oriented farming. Precision farming must ensure efficiency in agriculture.
- **Education:** Hybrid learning models, global online universities, AI tutors must ensure high quality interactive education that is functional and solution based, not just theoretical.
- **Energy:** Global leader in green hydrogen, wind-solar hybrids. India must become a net exporter of fuel, and this will change the entire international trade and commerce.
- **Infrastructure:** Resilient, disaster-proof, smart mega cities with seamless and efficient supply chain will help in improving the quality of life.
- **Financial inclusion:** Ensure basic living standards for every Indian is taken care of. And in the case of government support, direct credit facility is provided timely. Digital currency and de-dollarization should be done to ensure India is not fragile with global fluctuations.

d) Urban Amenities in Rural Areas (PURA) Universal access to fibre internet, 24/7 electricity, online education, telemedicine, and e-governance in every village will unlock a lot of energy and people will not migrate to cities.

e) Global Diplomacy and Peacebuilding: India must be a voice for the Global South, climate justice, and spiritual diplomacy.

f) Environmental Stewardship: India must lead the transition to a regenerative economy—forestation, zero carbon cities, and biodiversity conservation.

Infographic: India's Global Position by 2047

- Top 3 in space research
- Top 5 in green energy exports
- 100 per cent rural internet and health coverage
- Net-zero carbon emissions target by 2070 on track

6. INNOVATION

Thinking out of the box will not be enough, we will have to dissolve the boxes altogether. Thinking outside the box – LFEAD = Dissolve the Box; where LFEAD is the gang of 5 internal villains such as Limited self-understanding + Fear + Ego + Attachment + Dominant Mind.

A culture of curiosity, experimentation and fearless creativity is essential, and these villains stop us from the first principle thinking.



a) Curiosity-Driven Mindset: From school curricula to corporate training, India must nurture inquiry, exploration, and scientific temper.

b) Future Innovations Across Sectors:

- Quantum computing and AI ethics
- Bioengineering for disease eradication
- Vertical farms and lab-grown meat
- Autonomous electric mobility
- Drone based mobility and product delivery
- Lunar economy and space mining
- Climate resilience technologies

c) Dissolve the Box: Encourage interdisciplinary learning, moonshot projects, and experimental labs in every university. Help people to operate from the field of all possibilities, infinite creativity and abundance while living every moment. Development must be on all fronts be it sports, defence, space, industries, services and so on.

d) National Innovation Ecosystem: Government-industry-academia collaboration to build India's own Defence Advanced Research Projects Agency of USA (DARPA-like innovation agency).

e) Youth as Innovators: Every school child as a potential inventor. Innovation Olympics. Gamification of problem-solving.

f) India must focus on manufacturing in India for the world: India must lead this by automating the production process, improving the supply chain, introducing robots and humanoids and ensure the production process is most efficient and world class.

Infographic: Innovation Ecosystem Goals

- 10,000 innovation labs
- 1 million STEM researchers
- Global Innovation Index: Top 5
- 50% of patents from Tier 2/3 cities

7 BONUS SPRINGBOARD: CULTURAL INTELLIGENCE

A sixth, invisible springboard is India's cultural richness. Art, literature, festivals, and heritage tourism can become tools for soft power and national unity.

Cultural Capital as GDP Enhancer:

- India's heritage economy can contribute 2-3 per cent to GDP.
- Export of Indian content (music, cinema, literature) is booming.



- Cultural startups like virtual museums, AI art, and gamified history can engage youth.

Cultural Diplomacy: Promoting cultural missions in foreign countries, hosting global yoga festivals, and digital storytelling for the diaspora.

Indigenous Knowledge Systems: Reviving and documenting India's ancient sciences—metallurgy, water management, astronomy, ecology, and architecture.

Infographic: Cultural Contributions to GDP

- Film industry: \$2.7 billion
- Handicrafts export: \$4 billion
- Yoga tourism: \$5 billion+

8. CONCLUSION

Viksit Bharat is a soulful superpower that is going to give direction to the world.

A \$30 trillion economy is a milestone, not a destination. Viksit Bharat 2047 will be a soulful superpower—technologically advanced, environmentally responsible, spiritually grounded, and globally respected.

It will be a nation where:

- A rural student learns quantum physics on a solar-powered tablet.
- A tribal artisan exports globally through ONDC.
- AI helps a farmer predict rainfall patterns.
- Scientific spirituality guides corporate governance.
- Innovation flourishes in every village and town.

Viksit Bharat is not a dream. It's a decision—a collective will to rise, evolve, and lead. It can only happen with *sabka saath, sabka vikas and sabka prayas*.

Jai Hind.



CATALYSTS OF TRANSFORMATION: THE STRATEGIC ROLE OF CMAS IN REALISING THE VISION OF VIKSIT BHARAT @ 2047



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INTRODUCTION

VISION 2047 aims to build a nation that is economically robust, socially inclusive and environmentally sustainable by addressing the challenges and opportunities of a rapidly changing world. This mission encompasses fostering inclusivity, reducing inequality, promoting education and skill development, enhancing healthcare, ensuring environmental sustainability with emphasis on renewable energy, eco-friendly practices and climate resilience reflecting a commitment to sustainable practices that protect natural resources and bio-diversity for future generations and preserving the cultural heritage.

Viksit Bharat@2047 also underscores the importance of inclusivity with targeted initiatives to uplift marginalized communities, empower youth and reduce inequalities across regions and sectors. It aims to take India's economy to \$30 trillion within just two decades.

Thus Viksit Bharat@2047 roadmap requires a comprehensive and integrated approach that spans economic growth, national security, global partnerships, legal reforms, good governance with transparency and social and political objective. Through collaborative efforts across government, private sector, civil society and by focusing on holistic progress, India aims to build a society that thrives on equity, innovation and shared prosperity for all its people.

PROPELLERS OF VIKISIT BHARAT 2047

1. Economic Competitiveness and Growth: This will be at the core of India's development strategy. VISION acknowledges that innovation, entrepreneurship and technological advancement are critical drivers of a thriving economy. By strategically investing in key sectors like technology, manufacturing, infrastructure and renewable energy, India aims to position itself as a global economic powerhouse. The focus on inclusive growth is

crucial, ensuring that the benefits of economic progress are shared across all sections of society. Efforts will be made to bridge regional and social disparities, creating opportunities for under-served communities and promoting equitable access to resources. Furthermore, fostering a competitive business environment, supporting small and medium enterprises (SMEs) and enhancing the ease of doing business will contribute to generating employment and uplifting the standard of living of all citizens. With a forward-looking approach, India seeks not only economic growth but also prosperity that touches every citizen.

Towards achieving the economic competitiveness and growth the following fundamental structural issues need to be addressed upon:

- a. **Agriculture:** Implementation of several schemes is the key to a prosperous, self-reliant, sustainable agriculture sector with an aim to make our country as the ‘food basket of the world’. Schemes such as *Fasal Bima Yojana*, Kisan credit card, Soil Health Cards to ensure financial security and protection against crop loss risk, development of irrigation facilities, linking of rivers, Agriculture Infrastructure Fund, minimum support price, enhanced credit availability and titles, promoting organic farming and sustainable fertiliser use etc. Use of precision agriculture techniques enabled by IoT sensors, drones, satellite imagery and data analytics are enabling sustainable farming, promoting bio-diversity, minimising environment impact and soil conservation.
- b. **Infrastructure:** Infrastructure is the basic foundation of a nation and the fate of a nation’s economy is directly integrated into its infrastructure development. High transaction costs arising from inadequate and inefficient infrastructure can prevent the economy from realising its full potential regardless of the progress on another fronts.

India’s infrastructure sector stands as a cornerstone of the country’s economic development with robust activity across roadways, railways, airways, ports, power, energy and construction. Backed by substantial investments, strategic government initiatives, the sector has witnessed unprecedented growth over the past few years. The expansion of national highways, metro corporation, logistic parks and the ambitious *Bharatmala* project are transforming surface connectivity, while the railways are witnessing a significant upgrade through electrification, high speed corridors and station modernization under *Gati Shakti*. *Vande Bharat*, India’s flagship semi-high -speed train, symbolizes the modernization of the country’s railway network with enhanced speed, comfort and efficiency.

The UDAN scheme is improving the regional air access and *Sagarmala* initiative is boosting maritime trade and port infrastructure. In the

power and energy space, the transition towards renewable sources is accelerating. Construction activity remains resilient, supported by rapid urbanisation and Government backed housing initiatives, creating demand across real estate and allied industries. Private capital/participation in Infrastructure projects is increasing steadily aided by reforms in public-private partnership (PPP) models and increased monetisation opportunities through instruments like infrastructure investment trusts (InvITs).

- c. **Education:** Viksit Bharat aims to provide hundred per cent good quality school education with skilled manpower to develop the nation and also supply to the world. To achieve this massive goal there is a need to set up more IIT's, IIM's, medical institutions, ITIs, Government schools with modern digital facilities, labs equipped with modern gadgets nationwide to encourage scientific temperament and vocational training centres like SAMARTH Udyog Centres to train the workforce for Industry 4.0.

Holistic education with emphasise on foundational literacy, adaptive curricula, and credit-based learning, well equipped and trained teachers, increased yearly education budget of Centre and State Governments, free education to marginalised income group children, mid-day meals, tie ups with world renowned universities and management and technical institutions is the need of hour.

- d. **Women Empowerment:** Women empowerment is a must to promote a culture of increased inclusivity, protection of their rights and providing security. India ranks top among those producing female graduates in the science, technology, engineering and mathematics (STEM Industry). Presently as many as 40 per cent of the women graduate from this field. In India, 20.3 per cent of women are MSME owners making of 23.3 per cent of the labour force. According to McKinsey Global, India can potentially contribute 700 billion \$ to global GDP by increasing female labour force participation. About 20 of the start-ups are run by women.

Woman empowerment could be further improved by promoting schemes like 33 per cent reservation in Parliament and State Assemblies, quotas to SC and ST women, proportional representation in Government and private jobs, increased maternity benefits, free education, protecting working women from sexual harassment, promoting women's entrepreneurship by extending Mudra Yojana, training and support to women start ups and MSMEs.

- e. **Healthcare:** Access to high-quality, robust, affordable, comprehensive, inclusive and sustainable healthcare through a sequence of flagship programs such as the PM-Ayushman Bharat Health Infrastructure Mission and Digital Mission, e-Sanjeevani OPD and PM Jan Aushadhi Yojana for accessibility and affordability of quality care and medicines, rehabilitation,

child health, nutrition mission, insurance health card etc. Setting up of Primary Health Centres at villages and super speciality hospitals at taluka level, digital consultation, NGO's encouragement, etc are also essential to provide timely and affordable health care.

f. *Zero Poverty & Improvements for middle class:* Zero poverty is achievable through a multi-dimensional approach towards empowering the underprivileged and promoting inclusive development. Essential infrastructure development and food security schemes are required to ensure that no one sleeps on an empty stomach. In addition to overall tribal development, a level playing field for marginalised populations and affordable homes with basic amenities are necessary to enhance their quality of life. Middle-class welfare is to be ensured through enhanced infrastructure and employment generation. Urban schemes like affordable houses, enhanced water and sewer connections, green spaces and *har ghar jal* /tap water to every rural household should be given priority. The *Rozgar Mela* drive to create more jobs, vocational and on the job training to upgrade the skills of middle-class employees are also to be given priority. ,

g. *MSME:* Micro, Small and Medium Enterprises (MSMEs) have been playing a key role in the economic growth of the country and evolving as the back bone of the country's economy by its nature, size, coverage, employment potential, inclusiveness and contribution to GDP. By end 2024 there were a total of 24.41 million MSMEs registered in the Udyam site maintained by the Ministry of MSME, out of which 97 per cent were Micro, 2.5 per cent Small and 0.5 per cent Medium category. They employed 15.5 Cr workers, manufacture more than 8000 plus products and contribute to 40 per cent of manufacturing outputs and 45.56 per cent of India's total exports (FY 2023-24). MSMEs have proven their innovative success story in design, expertise, IPR and digitisation. MSMEs are the pillars of *Atma Nirbhar Bharat/Make in India*.

However, MSMEs are saddled with various bottlenecks like entrepreneurship culture, risk taking ability, funding, market linkages, CAPEX, lack of sufficient asset cover as collateral to secure loans. To overcome these constraints and challenges, the Government has launched many schemes and framed policies like Prime Ministers Credit Guarantee Scheme for Micro & Small Enterprises, Micro & Small Enterprises Cluster Development Programme, Entrepreneurship and Skill Development Programme, Procurement and Marketing Support Scheme for Promotion of Innovation, Rural Industries and Entrepreneurship, amendment to MSME Act, 2006, various credit guarantee schemes regulated by RBI, creation of Trade Receivables Discounting System (TReDS), collateral

free limit, cash flow based lending, portability of MSME loan and restructuring of NPA accounts.

- h. *Start-ups*:** A start-up India is a flagship initiative of the Government of India intended to build a strong ecosystem for nurturing innovation and start-ups in a country that will drive sustainable economic growth and generate large scale employment opportunities. An entity needs to register as start-up India to work towards innovation or development or improvement of existing products/processes or services with a scalable business model having a high potential of employment generation or wealth creation.

The Government of India has created a Start-up portal <https://www.Start-upindia.gov.in/> which serves Start-up's network to access free tools & resources and participate in programs and challenges. Besides, a Start-up Hub has also been created to interact among each other, exchange knowledge and form successful partnership in highly dynamic environment.

Besides traditional funding options of direct equity/warrants and SAFE IPO, venture capital, angel investments, crowd funding and bootstrap financing, the Government has been supporting start-ups through various schemes like credit linked capital subsidy for technology upgradation, tax exemption for 10 years, no inspection for first three years by labour and environmental authorities, protection to IPR and fast track examination of patent application, non-applicability of prior experience/turnover criteria for participating in Government tenders. R & D facilities have also been established to facilitate R & D activities.

Further for start-ups to focus on innovation Annual incubator grand challenges, innovation focused programs for students, harnessing private sector expertise for incubator have been set up through industry academia partnership and incubation.

About 1.14 lakh start-ups have been recognised by the Department of promotion of Industry and International trade (DPIIT) by 2024. About 112 Start-ups valued at \$ 01 billion have also been recognized as UNICORNS. Currently India boasts of the world's third largest start-up ecosystem. In coming days, these start-ups with the active support of Government will drive the economic growth, bring in new futuristic technologies and create large scale employment opportunities.

2. National Security and Stability

This is another foundational pillar for India's transformation. A strong security framework is essential for long-term peace and prosperity. This involves

modernizing defence forces, enhancing cybersecurity infrastructure, and improving border security. Strengthening internal security to address threats such as terrorism, cyber attacks, and internal conflicts is crucial. There is a need to build resilience against natural disasters by developing robust disaster management systems to safeguard communities and vital infrastructure. To mitigate vulnerabilities in its defence supply chain, India must reduce its dependence on foreign military imports, address cyber security risks, and improve logistics infrastructure. Public-private partnerships should be encouraged to promote indigenous defence production and technology development. Leveraging AI-driven logistics and implementing blockchain for enhanced security will improve the resilience of defence supply chains.

3. Global Partnerships and Strategic Influence

This will be the key to securing resources, enhancing technological capabilities and improving India's geo-political standing. Strengthening diplomatic ties, expanding trade partnerships and actively engaging in international organizations focusing on strategic issues like climate change, global trade and security will enable India to position itself as a leader in global governance. By actively participating in global organizations such as the UN, WTO, and BRICS and strengthening bilateral and multilateral relations, particularly in regions such as South Asia, Europe, North America, Africa, and Latin America, India can ensure energy security through diversified imports, secure better trade agreements, promote technological collaboration and open new markets for economic engagement.

4. Good Governance

Viksit Bharat@2047 promotes good governance. Transparent, accountable, and responsive governance practices will be central to the VISION, as they are key to creating a system that works for the people. The vision focuses on reforming bureaucratic processes, simplifying administrative procedures and reducing red tape to improve efficiency and effectiveness in public administration.

India has made tremendous strides in the direction of business facilitation with an emphasis on simplification, transparency and reduction in compliance. The Government has removed 41,000 redundant compliances and de-criminalized specific company law provisions that are making the business ecosystem more facilitative. Tax reforms have further reduced the corporate tax burden and implementation of the PLI scheme, industrial corridor and National Single Window System are accelerating manufacturing and investment. GST implementation has united the market and digital initiatives like Aadhaar-DBT and UPI have revolutionised the payments and financial inclusion and made



India a world leader in digital transactions. The Government e-Marketplace has enhanced procurement transparency and efficiency.

5. Sustainability

Sustainability refers to the ability to meet the needs of the present without compromising the ability of future generations to meet their own needs. It involves balancing the economic, social and environmental considerations to ensure that resources and ecosystems are preserved and utilized in a way that allows their continued availability, sustainable future for the planet and its inhabitants.

India is taking giant leaps in sustainability through efforts in renewable energy and waste management. India is now the 4th largest in the world in terms of installed renewable energy capacity, with solar capacity growing exponentially. The Global Biofuel Alliance, championed by India, is leading the way in the use of sustainable biofuels around the world. Through the PM-KUSUM scheme, India is empowering farmers with solar energy solutions. At the same time, the “One Sun, One World, One Grid” initiative aims to develop a global grid for solar energy, encouraging sustainable growth on the world map.

6. Emerging technology and innovations

The emerging technologies are poised to play a transformative role in driving the economic growth, enabling efficient governance, enhancing global competitiveness and catalysing sustainable development. In this digital age, technologies such as artificial intelligence (AI), blockchain, internet of things (IoT), cloud computing, big data analysis and advanced robotics are rapidly revolutionizing various sectors and redefining the way businesses operate and nations govern.

Blockchain-based solutions like decentralised finance (DeFi) platforms are enabling transparent and secure cross-border transactions, streamlining trade finance processes, and reducing operational costs.

The use of Industry 4.0 equipment, machineries and processes is enabling industry in optimising operations, minimizing downtime. enhancing supply chain management and improving operational efficiency. Additive manufacturing (3D printing) is revolutionizing the product design and production, enabling mass customization and reducing waste.

IoT integrated into infrastructure and public services, is facilitating in real time monitoring, ensuing adherence to regulatory norms optimizing resources utilisation, reducing carbon foot prints and improve urban planning.

Indian Government is actively employing these emerging technologies and forming various schemes and projects for adoption of the same by farmers

and industry by extending soft loan, grants and subsidies. Industry and educational institutions are also encouraged to carry R&D and innovation in these emerging technologies.

ROLE OF CMAs IN VIKSIT BHARAT 2047

The main role of a CMAs is to provide financial expertise and guidance to help organizations make informed decisions and improve their financial performance. CMAs utilize their knowledge of financial planning, cost management, risk analysis, and strategic decision-making to advise and support management in areas like budgeting, forecasting, performance evaluation, and internal controls. Specific role and responsibilities of CMAs are outlined in the following paragraphs.

1. Strategic Decision-Making for Economic growth

CMAs provide financial insights to support strategic decisions, such as investment appraisals, mergers, acquisitions and collaborations to facilitate economic growth.

2. Financial Reporting, corporate governance and Compliance

They prepare financial statements and ensure compliance with Accounting Standards and regulatory requirements. CMAs assist in smoother implementation and ensure effective compliances of applicable laws, guidelines, rules and regulations as a good corporate governance.

3. Risk Management

CMAs assess and manage financial risks, both internal and external, to ensure business stability.

4. Financial Planning and Analysis

CMAs develop and implement financial plans and budgets, analyze financial data, and make recommendations to improve financial performance.

5. Cost Management

CMAs analyze costs, identify cost-saving opportunities and implement cost-control measures.

6. Internal Controls

CMAs develop and maintain internal control systems to prevent fraud, errors, and misstatements.

7. Performance Evaluation

CMAs establish and monitor key performance indicators (KPIs) to track progress towards organizational goals.



8. Industry leaders

CMAs are often found in leadership roles within organizations, such as finance manager, corporate controller, or even CFO and their expertise is valuable in a wide range of industries. They are known for their analytical skills, business acumen and ability to bridge the gap between accounting and business strategy.

9. Ethical & Sustainable Business Practices

CMAs promote and guide the corporate sector in implementing policies that encourage ethical decision making and practices. They ensure sustainability by adopting and integrating various sustainability concepts like ESG and CSR into corporate strategies.

10. Capacity building initiatives to build a future ready work force

To stay ahead of the curve and effectively navigate the challenges and opportunities, CMAs are embracing new technology with a mindset of continuous learning and enhancing their digital literacy and technological proficiency. The academic curriculum of CMA profession is also revised and updated on a continual basis by the Institute to keep the students abreast and well equipped with new developments and emerging technologies.

CONCLUSION

From the foregoing discussion, it can be said that as India moves towards 2047 with aspirations of becoming a developed nation, the role of CMAs will be more critical than ever. Their expertise in finance and corporate governance, commitment to ethical practices, facilitation for economic growth will significantly contribute to realizing the vision of *Viksit Bharat*. By fostering a culture of integrity, transparency and accountability, CMAs will not only help companies thrive but also ensure that they contribute positively to the nation's socio-economic growth.

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ATTAINING SUSTAINABLE DEVELOPMENT GOALS THE ROLE OF CMAs



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ABSTRACT

In the journey towards a sustainable future, achieving the seventeen Sustainable Development Goals (SDGs) issued by the United Nations is considered imperative. SDGs offer a systematic approach towards sustainability by specifying multiple targets as well as indicators to evaluate the progress. However, integrating sustainability at the micro or organisational level is critical as it will require a wholistic process and cross functional effort for embedding sustainability in organisation's strategic thinking, decision making and execution. CMAs with their critical thinking ability, analytical and data management skills and capability to work with cross-functional teams, can contribute positively in this direction. The present article is an attempt to explore the possible role of CMAs in this movement of sustainability.

1. INTRODUCTION

Economic development of a nation often comes at the cost of societal inequity and environmental degradation. As a result, though such development ensures current achievements, they fall short of future expectations. This is why experts and activists around the world advocate for sustainable development which can essentially provide a solution to the impending problems of the world including poverty, lack of quality education, health, social inequity and deprivation of economic resources. The Sustainable Development Goals (SDGs) issued by the United Nations offers a shared blueprint to combat against these problems through a global partnership to ensure peace and prosperity for people and the planet. However, implementing these goals pose unprecedented challenges for businesses. It is in this context that the Cost and Management Accountants (CMAs) can play a pivotal role. The present article seeks to explore and suggest how the skills embedded in a CMA can help in attaining and maintaining SDGs



to offer a better future for the people and this planet.

2, SUSTAINABILITY AND SUSTAINABLE DEVELOPMENT

Sustainability refers to the ability to continue any practice in the long term without creating a negative impact on the environment, society or economy. Though the term can be used in multiple contexts, it is often found to be integrated with the development process of a nation. Accordingly, *sustainable development* refers to the practice of meeting present needs without compromising the ability of future generations to meet their own (Brundtland Commission, 1987). It is all about balancing economic growth, environmental stewardship and social equity. Sustainable development is a holistic approach which emphasizes the inter-connectedness of various systems and encourages policies that promote long-term sustainability while addressing immediate challenges.

3. SUSTAINABLE DEVELOPMENT GOALS

3.1 Historical Development of SDGs

The concept of sustainability has its root in the post-World War II era. During this period, rapid industrialization and urbanization escalated industrial pollution and loss of biodiversity and raised serious concerns of activists from European countries. In 1970s environmental movements gained more momentum. First Earth Day in 1970 was a significant event in this connection. In 1972, the Club of Rome's report, *The Limits to Growth*, expressed serious concern about increasing population, depletion of limited natural resources and loss of habitat for flora and fauna around the world and raised alarm about economic development at the cost of society and environment.

In 1980, the report of International Union for Conservation of Nature (IUCN), *World Conservation Strategy*, first coined the concept of sustainable development. The Report put stress on the need for conservation of natural resources and their sustainable management to ensure a better future (IUCN, 1980). In 1987, the term 'sustainable development' got more recognition when it was given a formal definition by Gro Harlem Brundtland, in his report submitted on behalf of World Commission on Environment and Development (WCED) (Brundtland Commission, 1987). In June, 1992, at the Earth Summit in Rio de Janeiro, Brazil, the UN Member States adopted Agenda 21 to build a global collaboration to ensure improved human life and limit environmental harm. In September 2000, the Member States adopted Millennium Declaration. They set eight Millennium Development Goals

(MDGs) with the objective to bring down extreme poverty by 2015. In 2002, the UN members further adopted Johannesburg Declaration on Sustainable Development in this direction. In June 2012, at the United Nations Conference on Sustainable Development (Rio+20), the UN decided to initiate a process of developing a set of Sustainable Development Goals (SDGs) based on MDGs. Accordingly, in 2013, a 30-member working group was set up. Finally, in September 2015, at UN Sustainable Development Summit, the 2030 Agenda for Sustainable Development was adopted with 17 SDGs.

3.2 The Seventeen Sustainable Development Goals

The following is a list of seventeen Sustainable Development Goals (SDGs) issued by United Nations.

FIGURE 1: SUSTAINABLE DEVELOPMENT GOALS*



*Source: <https://unosd.un.org/>

The description of each of these goals is included in the following Table:

FIGURE 2: DESCRIPTION OF SUSTAINABLE DEVELOPMENT GOALS*

Goals	Description
1	End poverty in all its forms everywhere
2	End hunger, achieve food security and improved nutrition and promote sustainable agriculture
3	Ensure healthy lives and promote well-being for all at all ages
4	Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all
5	Achieve gender equality and empower all women and girls
6	Ensure availability and sustainable management of water and sanitation for all
7	Ensure access to affordable, reliable, sustainable and modern energy for all
8	Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all
9	Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation
10	Reduce inequality within and among countries
11	Make cities and human settlements inclusive, safe, resilient and sustainable
12	Ensure sustainable consumption and production patterns
13	Take urgent action to combat climate change and its impacts
14	Conserve and sustainably use the oceans, seas and marine resources for sustainable development
15	Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, halt and reverse land degradation, and halt biodiversity loss
16	Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels
17	Strengthen the means of implementation and revitalize the global partnership for sustainable development

*Source: Own Compilation

3.3 Implementation of SDGs: –The Present Status

Implementation of SDGs is a challenging job for nations and corporations.

This is why, United Nations has extended its active support to all the Member States and businesses therein to ensure smooth implementation of SDGs. Accordingly, Division for Sustainable Development Goals (DSDG) under United Nations Department of Economic and Social Affairs (UNDESA) offers support and capacity building for businesses in the Member Nations. Attaining the objectives of 2030 Agenda requires strong commitment on the part of all the stakeholders and a sincere effort to own the SDGs. DSDG actively helps stakeholders in this process and also conducts outreach activities. UN Secretary General publishes SDG Progress Report to report these activities on an annual basis. The following table shows the goal wise details of targets, no. of events and no. of actions taken till date.

FIGURES 3: EFFORTS TOWARDS ATTAINMENT OF SDGS*

Goals	Targets	No. of Events	No. of Actions
1	7	138	1494
2	8	120	1415
3	13	67	1318
4	10	75	1872
5	9	103	1739
6	8	301	1850
7	5	86	1070
8	12	123	2011
9	8	119	1095
10	10	98	1033
11	10	140	2961
12	12	56	1357
13	5	82	2229
14	10	140	2961
15	12	56	1357
16	12	75	1064
17	19	322	2274

*Source: SDG Progress Reports

3.4 Sustainable Development Goals – Success Stories

Globally, there has been an increasing awareness towards sustainability and SDGs in recent times. Countries across the world have realized that, irrespective of the level of economic prosperity achieved, attaining these goals are necessary to ensure a better society and an improved habitat. As a result, organisations have made considerable efforts to integrate the idea of

sustainability in all their activities and to attain and maintain the applicable sustainable development goals. A few such success stories are worthy to be shared as follows.

FIGURE 4: SDGS' SUCCESS STORIES*

How are businesses and organisations making a difference?	
<p>1. No poverty – Mars's The Livelihoods Fund for Family Farming will help businesses deliver large-scale social and economic benefits to smallholder farmers, supporting more profitable, sustainable work for farming communities</p> <p>2. Zero hunger – Royal DSM works to improve nutrition via initiatives like the Nutrition Improvement Program and Africa Improved Foods, as well as through partnerships such as with World Food Programme</p> <p>3. Good health and wellbeing – through innovation and partnership, GSK continues to take strides in fighting malaria, through the development of a vaccine candidate, and improving access to antiretroviral treatment for HIV</p> <p>4. Quality education – the CIMA qualification and CGMA designation provide quality education, training and continuing professional education to thousands globally, who in turn contribute to their economies and societies</p> <p>5. Gender equality – the AICPA Women's Initiative Executive Committee educates and supports individual women and organisations in the equal engagement of women and men in leadership of the accounting profession across the USA</p> <p>6. Clean water and sanitation – Diageo works with WaterAid to provide the Water of Life programme in Africa, focusing on communities with the greatest need that are located near or within areas where Diageo operates or sources agricultural raw materials</p> <p>7. Affordable clean energy – M-KOPA in Kenya enables off-grid communities to leap from using unreliable non-renewable energy to affordable and sustainable practices</p> <p>8. Decent work and economic growth – through IFAC's member bodies, the accountancy profession is strongly linked to prosperity and improved living standards. Accountants have a significant role to play in strengthening the institutions and architecture that will improve people's lives, particularly in developing economies</p> <p>9. Industry innovation and infrastructure – Airbus is using technological innovation to help address critical issues such as sustainable mobility, production infrastructure, cyber security and climate change</p>	<p>10. Reduced inequalities – in its Annual Report, PwC encourages transparency by publishing performance against grade pool targets for diversity and ethnicity, alongside indicators of social mobility for graduates</p> <p>11. Sustainable cities and communities – the mobile industry, in line with the GSMA Humanitarian Connectivity Charter and endorsed by the United Nations OCHA, has 103 mobile network operators across 76 countries that are committed to ensuring network resilience and supporting subscribers in crises and humanitarian disasters</p> <p>12. Responsible consumption and production – Unilever not only widely innovates around sustainable production, impacting greenhouse gas emissions, water use and waste and packaging, but has been reporting on its sustainability performance since 1996</p> <p>13. Climate action – Tata Motors is innovating around zero pollution, developing a fleet of fuel-cell buses, based on the hybrid platform series which can provide clean public transportation in cities where hydrogen infrastructure will be available</p> <p>14. Life below water – Dell has created the first commercial global ocean plastics supply chain, and will reuse plastic collected from beaches, coastal areas and waterways as packaging for its products</p> <p>15. Life on land – recognising that market-based financing from the private finance sector has great potential for nature conservation, Credit Suisse has strengthened its activities to enable the long-term protection of natural value and a financial return for investors</p> <p>16. Peace, justice and strong institutions – the accountancy profession's ethical, governance and professional standards enable practitioners to positively influence organisations in the public and private sectors by following their Codes of Ethics and supporting pan-profession Initiatives</p> <p>17. Partnerships for the Goals – through co-branded CGMA and Transparency International UK (TI), the Association produces guidance for members and a wider global audience on prevention of fraud and corruption</p>

*Source: Creating A Sustainable Future; A Report of CGMA

4. ROLE OF CMAs IN ATTAINING SDGs

The scope of SDGs is vast. It applies to all nations – developed or developing. Similarly, it is the responsibility of all types of organisations irrespective

of their size and purpose. Since businesses have the required economic power and global influence, they have an important role to play in attaining the goals sought after in SDGs. This, in turn, is beneficial for businesses also. This is because, SDGs advocate ‘the importance of the mutually interdependent ecosystems in which markets, countries and communities co-exist’ (Barman, 2018). Attaining SDGs are likely to reward organisations with new opportunities helping the regional markets to grow. Additionally, SDGs ‘will strengthen the overall global economy, boosting trade worldwide and encouraging businesses to find new partners’ (Barman, 2018). Finally, ‘sustainability is fast becoming the lens through which a business is judged by its customers, workforce, society, Governments and even its investors’ (PWC Sustainability Practice, 2024). Thus, organisations should make sincere efforts to contribute to the achievement of these goals and it is in this context that the Cost and Management Accountants (CMAs) can play an indispensable role.

According to Stathis Gould, Head of Professional Accountants in Business Service Delivery, IFAC, “The expectation on businesses is at an all-time high. Management Accountants are critical in helping them to integrate the Goals into governance, management and reporting as well as in facilitating greater connectivity between social and environmental benefit and economic benefit.”

CMAs are expected to play a significant role in attaining and maintaining SDGs in the following ways:

I. Measuring and Reporting Sustainability

- a. **Developing KPIs and metrics to track progress on SDGs:** CMAs are well equipped with the desirable analytical knowledge to develop key performance indicators (KPIs) and matrices based on which an organisation’s progress towards the SDG targets can be regularly assessed. Such an assessment is required to make changes in organisation’s strategic stance towards SDGs periodically.
- b. **Incorporating sustainability data into financial reporting:** Incorporating sustainability data into corporate financial reporting conforms to SDG 12, *Responsible Consumption and Production*. Sustainability data complement financial reports by providing a 360° appraisal of corporate performance. Such combined reports will be a step ahead towards integrated reporting. More particularly, ‘integrated reporting is an effective mechanism for monitoring the allocation of six different capitals – human, social and relationship, intellectual, natural, manufacturing and financial – to pursuing the SDGs’ (Barman, 2018). CMAs can play an effective role in collecting and processing the sustainable data and incorporating the same in financial reports.



- c. **Conducting sustainability audits and assurance:** Sustainability audit and assurance is an independent verification of sustainability data and related disclosures with an objective of improving the credibility of information disclosed. Due to their 'expertise in the field of financial planning, evaluation and optimal resource allocation, CMAs have a key role in ESG reporting and ensuring sustainability and competitiveness' (Manoj, 2022).

II. Strategic Planning and Decision-Making

- a. **Incorporating sustainability into strategic planning and goal-setting:** In today's dynamic business world, 'actively aligning business strategies with the SDGs can also enable companies to maintain and strengthen their license to operate' (Barman, 2018). Since, CMAs are responsible for strategic planning and long-term goal setting, they are well in place to incorporate and integrate environmental, social and economic considerations in strategic business decisions to achieve sustainable development goals.
- b. **Evaluating business decisions through a sustainability lens:** Sustainable business practices create shared values for stakeholders beyond shareholders and hence can eventually achieve SDGs. CMAs can play an important role in ensuring that the company's business model is sustainable by evaluating business decisions through a sustainable lens.
- c. **Advising on sustainable business models and practices:** CMAs are well equipped with the required skills to analyse the effectiveness and efficiency of organisational activities to evaluate whether they create or destroy value. Hence, they can essentially advise the management on sustainable business models and practices to be adopted by the organisation.
- d. **Focus on Governance:** SDG 16, *Peace, Justice and Strong Institutions*, has particular targets of reducing corruption and bribery in all their forms (16.5) and develop effective, accountable and transparent institutions at all levels (16.6). CMAs, as internal auditors and sustainability auditors, can bring out irregularities in the organisational governance process and thereby can help the organisation to be ethically sound with a strong corporate culture.

III. Driving Organizational Change

- a. **Advocating for sustainability within the organization:** CMAs are often the change agents in organisations. They have an end-to-end view of an

entity's business model. Moreover, they are capable enough to handle innovative technology. This makes them 'perfectly placed to introduce the conversations and report on the opportunities and delivery of value that the SDGs bring' (Barman, 2018). This facilitates achieving SDG 9, *Industry, Innovation and Infrastructure*.

- b. *Educating and training other departments on sustainability:*** CMAs can play the role of a guide in the process of embedding sustainability in organisation's activities and culture. Due to their in-depth understanding of possible impact of business activities on value creation in various parts of an organisation's value chain, they can essentially develop an organisation-wide awareness over sustainable business practices that can create value.
- c. *Collaborating cross-functionally to implement sustainable initiatives:*** Value creation is not a solitary process but requires collaboration across departments. CMAs can help the cross-functional teams striving for building a sustainable business model in the organisation by providing various information – actual and budgeted.

IV. Engaging with Stakeholders

- a. *Communicating sustainability performance to investors, customers, etc.:*** Organisations must communicate their success in integrating sustainability in their business practices to the stakeholders including investors and customers. This will create a sense of trust among the stakeholders and their enhanced engagement with the organisation will lead to value creation.
- b. *Partnering with NGOs, policymakers, and community groups:*** Organisations need to build partnerships to ensure achievements of SDGs. The need for building global partnerships is also recognised in SDG 17, *Partnership for the Goals*. Organisations should partner with NGOs to implement CSR practices to create societal value. They should collaborate with Governments and policy makers to improve industry infrastructure or to improve access to education. They should also partner with community groups to protect and promote their interest. Finally, companies may need to come together to 'fight against corruption and level the playing field for mutual gain' (Barman, 2018). CMAs naturally possess the requisite skills of analysis, negotiation and decision making using which they can help organisations to explore and build such partnerships.
- c. *Staying up-to-date on sustainability regulations and best practices:*** Since CMAs need to support the decision-making process in the organisation, they must have up-to-date knowledge about various regulations which may

have a bearing on organisation's decisions. Their in-depth knowledge about various sustainability regulations (such as corporate social responsibility and business responsibility and sustainability reporting guidelines) can really be helpful for the organisation to comply with the regulations.

5. CONCLUSION

Achieving SDGs is beneficial for both an organisation and a nation. At the micro level, it is beneficial for an organisation as it brings enhanced profitability, better stakeholder engagement, recognition as a responsible corporate citizen and improved value creation across the organisation value system. On the other hand, at the macro level, it is beneficial for a nation as it brings economic prosperity and better standard of living for people, a social structure with shared values and a conserved ecology through responsible usage of natural resources. However, this requires integrating the idea of sustainability in each and every organisational activity as well as organisational culture. CMAs with their capability of critical thinking and strategic planning, multi-dimensional analytical and data handling skills and ability to conduct critical appraisal of sustainable business practices can contribute immensely in this process. They are best-suited to act as the prime facilitators in this movement of creating a more sustainable future. What is needed is the self-belief in their capabilities.

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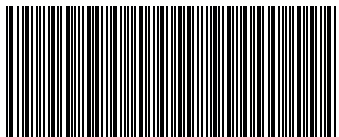
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